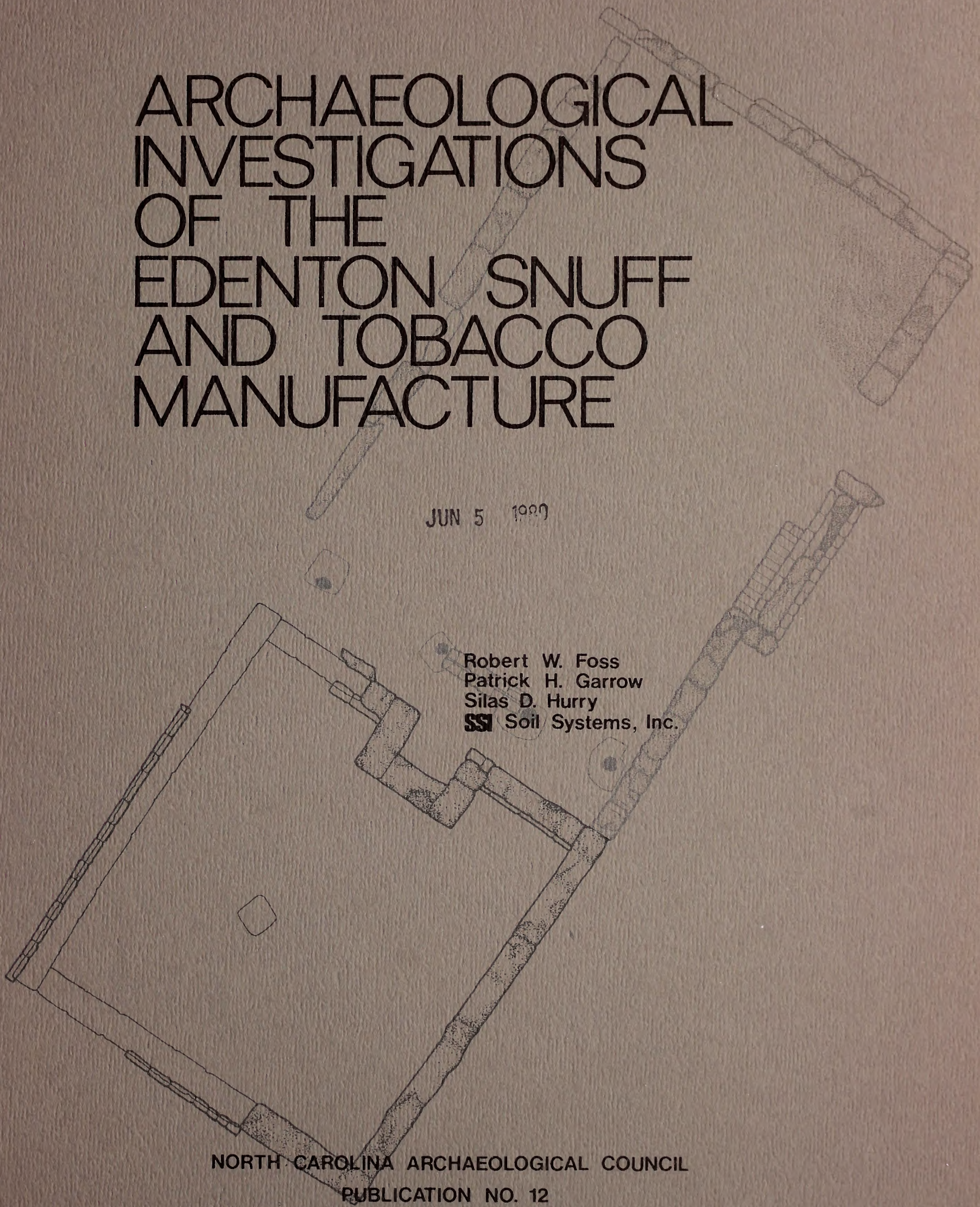
F8
3:12
C.2

North Carolina State Library
Raleigh

N. C.
Doc.

ARCHAEOLOGICAL INVESTIGATIONS OF THE EDENTON SNUFF AND TOBACCO MANUFACTURE

JUN 5 1990



Robert W. Foss
Patrick H. Garrow
Silas D. Hurry
SSI Soil Systems, Inc.

NORTH CAROLINA ARCHAEOLOGICAL COUNCIL
PUBLICATION NO. 12

North Carolina State Library
Raleigh

N. C.
Doc.

ARCHAEOLOGICAL INVESTIGATIONS OF THE EDENTON SNUFF AND TOBACCO MANUFACTURE

by

Robert W. Foss
Patrick H. Garrow
Silas D. Hurry

Prepared by
Soil Systems, Inc.
Marietta, Georgia
under contract with
Interagency Archeological Services-Atlanta
Contract Number C-5554 (78)

Published Jointly by the
North Carolina Archeological Council
and the
Archeology Branch
Division of Archives and History
Department of Cultural Resources
Sara W. Hodgkins, Secretary
Raleigh, North Carolina
1979

Digitized by the Internet Archive
in 2011 with funding from
LYRASIS members and Sloan Foundation

http://www.archive.org/details/archaeologicalin00foss

FOREWORD

This report discusses the excavation and analysis of the site of a proposed detention facility, and is primarily concerned with work conducted on a cellar ruin interpreted to have been the site of a mid-eighteenth century Snuff and Tobacco Manufacture. The second area explored under this project was initially believed to have been associated with the William Jackson Tannery, which was in operation at the same time as the Snuff and Tobacco Manufacture. Excavation and analysis revealed that a feature originally believed to represent a wall of the main tannery building was a late nineteenth century vintage drain.

A major goal of this project was the positive identification of the function of the cellar ruin. Archival data collected during the survey phase suggested that the ruin was associated with a Snuff and Tobacco Manufacture known to have been present on the site in the 1760s, and historical research conducted during the excavation phase served to further reinforce this hypothesis. Study of available documents concerning industries of this type revealed that few distinctive tools were associated with this activity, and that no distinctive architectural features could be expected to be present. It was therefore hypothesized that the only evidence of function of this ruin as a Snuff and Tobacco Manufacture was likely to be present in the form of tobacco seeds and changes in soil chemistry reflective of the chemical compounds used to prepare snuff. Extensive flotation samples and soil samples were collected during the excavation, but analysis of the ethnobotanical remains and the results of the chemical tests failed to confirm a function for the ruin.

A complicating factor encountered during the excavation was that it was not possible to assign a firm construction date for the cellar ruin. Diagnostic artifacts were absent in the unmodified portions of the builder's trench behind the cellar walls. Datable artifacts were recovered from some areas, but all of these areas bore evidence of extensive repairs. The results of excavation and analysis, however, indicate that the ruin quite possibly dates to the Snuff and Tobacco Manufacture period.

The available evidence for assigning the Snuff and Tobacco Manufacture function to the initial period of use of this site is admittedly circumstantial, but it is believed that the data are suggestive of that interpretation. If this interpretation is correct then perhaps the major contribution of this work is to point out that it may not be possible to identify industrial activities of this type through the application of archaeological techniques.

A number of problems were encountered during the course of this project. The problem which had the greatest impact on the work was the vast change in scope revealed when the modern structure above the ruin was removed. The project proposal was based on a cellar size of 15 by 15 feet with a depth of 5 feet. It was necessary to estimate the cellar size as the ruin was almost completely covered by a standing modern structure. Removal of this structure revealed that the cellar measured 12 by 35 feet. The depth of the cellar below ground surface varied, but averaged approximately 4 feet. Despite this significant increase in excavation size, it was not possible to extend the excavation more than three days beyond that planned in the project proposal. No additional analysis funds were made available. The excavation of the entire cellar was completed within budget (with the addition of three days of funding from IAS-Atlanta). This was a remarkable achievement on the part of the field director and crew, and could not have been accomplished without a highly dedicated and competent staff. It did not prove possible to complete the analysis and draft report within budget. Significant cost overruns were incurred during the laboratory phase of this project, and those extra costs were borne entirely by SSI. It is to the credit of the management of SSI that the decision was made to retain the original analysis plan despite its high cost to the firm. At no point was the quality of the analysis or report preparation reduced due to lack of funds.

Rather than dwell on the negative aspects of the project, it is better to look at the positive contributions to research contained in this report. This study embodies the application of several analytical techniques to the data and the comparison of the results of these techniques to give us a yardstick by which to judge the different methods of analysis. The ability to cross-check conclusions is the hallmark of science through experimentally reproducible results. By creating a set of tests and correlating the results, one can judge the applicability and reliability of the various tests. Through this method, analytical techniques can be honed and refined. The following report contains such a heuristic exercise. It is our belief that this alone is a meaningful research contribution.

PHG

ACKNOWLEDGMENTS

A project of this scope could not have been accomplished without the assistance of experts in various fields. Many persons were consulted during the analysis phase, and their contributions are gratefully acknowledged. Miss Elizabeth Moore, a lifelong resident of Edenton and accomplished local historian, deserves extra credit for her painstaking research into the history of the courthouse block. Her familiarity with the available records was invaluable in tracking down all possible avenues of research.

Mr. John Clauser of the Archeology Branch, Division of Archives and History, State of North Carolina, provided excellent and invaluable assistance in the identification of possible locally manufactured ceramics, and also provided critical assessment of the proposed interpretations. The time he spent visiting the site during the excavation and travelling to Atlanta to make suggestions during the analysis was appreciated.

Ivor Noël Hume and Audrey Noël Hume of the Colonial Williamsburg Department of Archaeology were consulted several times during the analysis. The authors appreciated the time taken from their busy schedules to assist in the identifications of unique artifacts and to provide suggestions on the interpretation. Ms. Merry Outlaw, Laboratory Curator for the Virginia Research Center for Archaeology, provided needed bibliographic material and suggestions for laboratory procedures. Mr. Gary McQuillen, Conservator for Colonial Williamsburg, provided information on current methods in the conservation of metal artfiacts.

Various interpretative ideas were explained by Gary Wheeler Stone of the St. Mary's City Commission. He also provided helpful comparative data and critical evaluation of the ideas presented. Mr. McKelden Smith, of the North Carolina Division of Archeology and Preservation, was consulted concerning the architectural interpretations made in the report. His discussions of these ideas with various architectural historians on the staff there helped to clarify some of the ambiguous areas of those interpretations. In addition, Mr. Edward Chappell, Kentucky Heritage Commission, contributed his wide knowledge of the archaeology and vernacular architecture of the eastern Virginia and North Carolina region.

Of course, the bulk of the credit must go to those individuals who did the actual physical work. Working under enormous time pressures, all were able to maintain extremely high quality work. For their individual endeavors they deserve to be cited. Mr. Madison Phillips of Edenton worked on the excavation of both the courthouse and the

detention center sites. His long-standing interest in archaeology, in general, and Edenton, in particular, joined with his ability to work rapidly and efficiently, his genial personality, and close relations with the people of Edenton make his assistance worth special mention. It was often felt by SSI staff members that without Phillips' presence the project would have become bogged down in many peripheral areas. Other crew members included Mr. Larry Morris, Ms. Charlotte Marshall, Ms. Linda Derry, Ms. Madonna Moss, Mr. Joe Richey, Mr. Charles Miller, and Ms. Lourdes Henebry.

The laboratory work was facilitated by the excellent assistance of Mr. Larry Morris and Mr. Silas Hurry. Mr. Hurry deserves much of the credit for the final compilation of the report, submitted to Interagency Archeological Services-Atlanta, and the final editing of that volume.

A portion of the fieldwork was conducted under a grant presented by the North Carolina Division of Archives and History. The field phase would not have been completed without that aid, and we are grateful to Mr. Brent Glass of the Division of Archives and History for securing those funds.

The draft project report submitted to Interagency Archeological Services-Atlanta was reviewed by Dr. Stephanie Rodeffer and Dr. David Brose. Their critical comments guided the draft revision and greatly strengthened the final report.

Stan Solamillo is responsible for the cover design and many extensive graphic revisions. Kim Sellmann Savage and Stephen Savage of the SSI staff performed valuable typing and graphics services to bring this report to the publication stage. Jana Kellar and Jack Bernhardt, both SSI staff members, offered constructive comments that strengthened this final report.

TABLE OF CONTENTS

FOREWORD iii

ACKNOWLEDGMENTS v

TABLE OF CONTENTS vii

LIST OF FIGURES viii

LIST OF PLATES ix

LIST OF TABLES xi

Chapter		Page
I.	INTRODUCTION	1
II.	HISTORICAL BACKGROUND	5
III.	THE TANNING AND SNUFF AND TOBACCO INDUSTRIES	21
IV.	THE DETENTION CENTER SITE	25
V.	CELLAR FILL	45
VI.	ARTIFACT ANALYSIS	59
VII.	ANALYSIS OF ARTIFACT FREQUENCY DISTRIBUTION	95
VIII.	SUMMARY AND SYNTHESIS	115

REFERENCES CITED 121

APPENDIX A: ETHNOBOTANICAL ANALYSIS REPORT 123

LIST OF FIGURES

Figure		Page
1.	The Project Area and Vicinity	2
2.	Block Plan - 1754-1757	6
3.	Block Plan - 1757	7
4.	Block Plan - Circa 1764	9
5.	Block Plan - 1769 from Sauthier Map	11
6.	Block Plan - 1778-1786	12
7.	Block Plan - Circa 1800	13
8.	Block Plan - 1819-1828	15
9.	Block Plan - 1829-1849	16
10.	Block Plan - 1850-1860	17
11.	Block Plan - 1890-1926	19
12.	Overview of Project Area	26
13.	Area A	28
14.	Plan of Area B Below Topsoil	34
15.	Cellar of Snuff and Tobacco Factory, Area B	36
16.	Cross Section AB, Area B	46
17.	Cross Section CD, Area B	47
18.	Cross Section EF, Area B	48
19.	Ceramic Frequencies	76
20.	Single Hole Bone Button Diameters	88

LIST OF PLATES

Plate		Page
1.	View to East - Area A	30
2.	View to North Showing Drain	30
3.	Overall View to East Showing Drain After Excavation	30
4.	Overhead View Showing Entire Cellar Area	37
5.	Overhead View of Central Portion of Cellar	37
6.	Detailed View to North Showing Brick Footing	37
7.	View to West Showing West Wall	39
8.	View to North Showing Construction Technique for Northern Cellar Wall	39
9.	View to East Showing Eastern Wall	39
10.	Detailed View of East Wall	41
11.	View to North Showing North Balk	41
12.	View to South Showing Southern Cross Balk	41
13.	View to West Showing Northwest Corner	50
14.	View to North Showing Dry Laid Brick	50
(Artifact Plates)		
15.	Selection of Flat Creamware Forms	68
16.	Selection of Creamware Hollow Vessel Forms	68
17.	Decorated Creamware Vessels	69
18.	Selection of Decorated Creamware Vessels	69
19.	Selection of Flat Form Vessels	70
20.	Selection of Edge Decorated Pearlware Vessels	70

21. Selection of Underglaze Decorated Polychrome Pearlware Vessels (Hand Painted) 71

22. Selection of Blue Hand Painted Pearlware and Annular Pearlware Vessels 71

23. Selection of Blue Transfer Printed Pearlware Vessels 72

24. Selection of Decorated Pearlware Vessels 72

25. Selection of Coarse Earthenware Vessels 73

26. Large Coarseware Vessels 73

27. Selection of Porcelain Vessels 74

28. Selection of Stoneware Vessels 74

29. Selection of Miscellaneous Ceramic Ware Vessels 75

30. Selection of Wine Bottle Glass 75

31. Selection of Case Bottle and Wine Bottle Glass 79

32. Selection of Glass Tableware 79

33. Selection of Pharmaceutical Bottle Glass 80

34. Selection of Activity Group Related Iron Artifacts 80

35. Selection of Personal Iron Artifacts 83

36. Selection of Architectural Related Iron Artifacts 83

37. Selection of Iron Kitchen Ware 84

38. Selection of Tobacco Pipe Artifacts 84

39. A Wide Selection of Buttons, Buckles, and Thimbles Recovered From Cellar Fill 87

40. Coins Recovered From Fill 87

41. Selection of Personal Items 92

42. Selection of Weaponry Related Artifacts 92

43. Selection of Brass Artifacts 93

LIST OF TABLES

Table		Page
1.	Ceramics From Drain Fill	31
2.	Comparison of *Terminus Post Quem* and Formula Dates by Stratum	52
3.	Ceramic Distribution by Stratum	60
4.	Frequency Distribution of Button Types Excluding Single Hole Bone Buttons	89
5.	Artifact Class Frequencies - Stratum I	97
6.	Artifact Class Frequencies - Stratum II	98
7.	Artifact Class Frequencies - Stratum III	99
8.	Artifact Class Frequencies - Stratum IV	101
9.	Artifact Class Frequencies - Stratum V	102
10.	Artifact Class Frequencies - Stratum VI	103
11.	Artifact Class Frequencies - Stratum VII	104
12.	Artifact Class Frequencies - Stratum VIII . . .	105
13.	Ceramic Vessel Distribution	111

I. INTRODUCTION

The archaeological excavations conducted on the site of the Edenton Snuff and Tobacco Manufacture represent one of two major projects conducted on a city block chosen as the location of a courthouse and detention facility complex. The overall project began with an archaeological reconnaissance conducted by SSI in February and March, 1977 (Garrow 1977). That reconnaissance indicated that the city block chosen for construction of the Courthouse Square complex (Fig. 1) had contained Edenton's earliest known industrial development. Historical maps and archival data clearly indicated that a tannery and Snuff and Tobacco Manufacture were present on the eastern half of the study block in the 1760s. Buildings of unknown function were present on the western half of the tract. The reconnaissance failed to produce direct physical evidence that archaeological remains reflective of the tannery and snuff and tobacco factory were present, but indicated that there was a very high probability that such remains would be found through intensive survey.

An intensive survey of the areas of planned construction was conducted in March, 1977 (Garrow and Warner 1977). The survey strategy employed on this project was designed to locate features associated with the tannery, and to assess the level of prior impacts to the western portion. The area believed to contain the Snuff and Tobacco Manufacture was not investigated at that time since no construction was planned for that portion of the block, and that property was still in private ownership.

The survey method employed in the area believed to contain the tannery involved application of patterned auger tests supplemented with pH testing. The rationale for that approach was that the tannery should have left fairly massive subsurface remains, and that the use of tanning bark over a period of time would have permanently altered the soil pH in the immediate areas used for tanning activities. The survey method proved to be extremely effective, and evidence of the tannery in the form of well preserved tanning vats and a lime kiln was found. A large linear brick filled feature was also found, and that feature was interpreted as a wall of the main factory building.

Auger tests were advanced on the western portion of the block, and eighteenth century domestic debris was recovered from what was then interpreted as a privy pit. Sufficient evidence was found on the western side to indicate that eighteenth century architectural remains should have survived the accumulated impacts of later construction in that area.

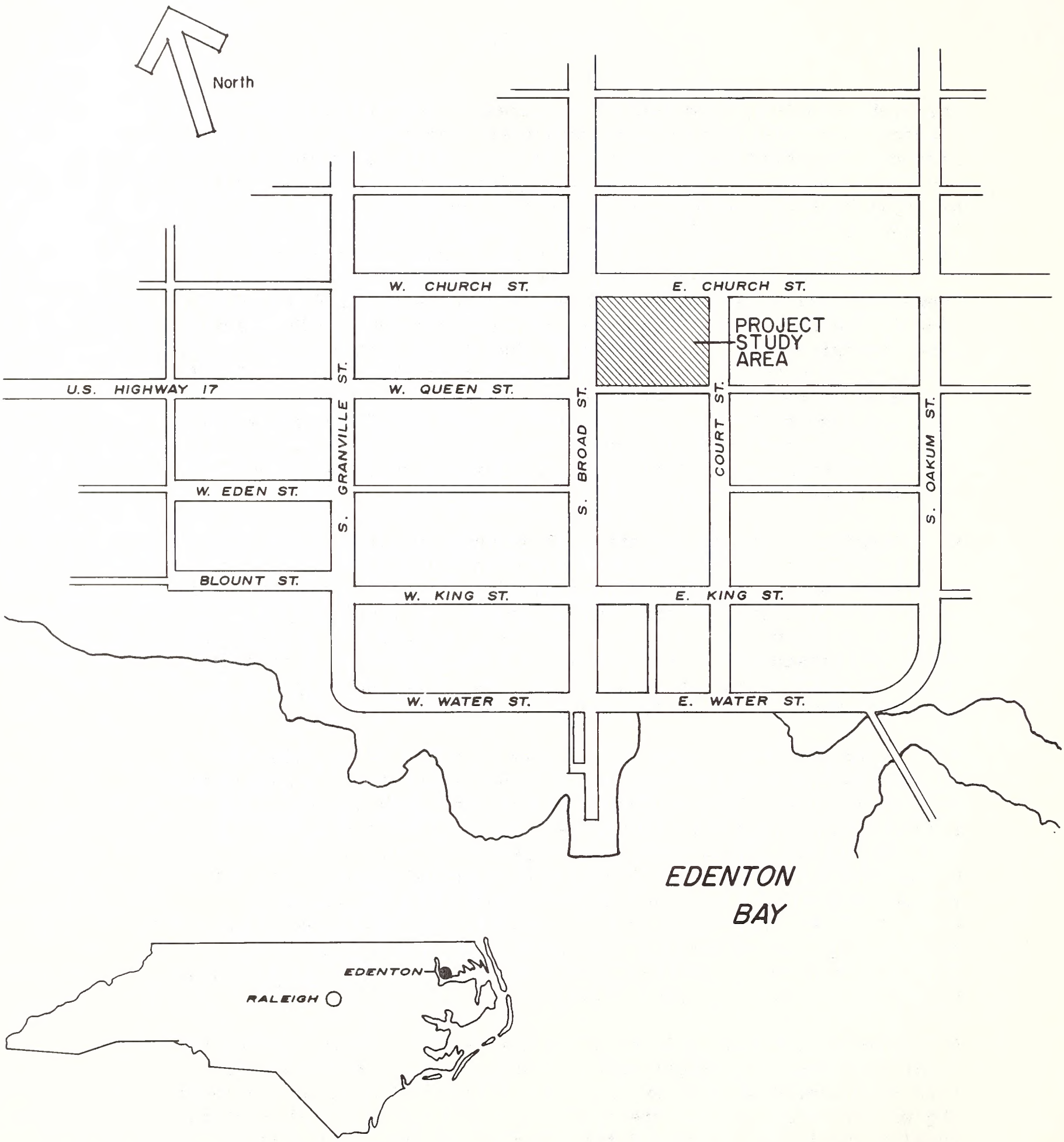


FIGURE 1 The Project Area and Vicinity

The results of the intensive survey clearly indicated that the tannery site contained significant and massive archaeological remains that were eligible for inclusion in the National Register of Historic Places. Review of the project plans revealed that construction of a proposed detention facility would effectively erase all traces of the tannery. It was recommended on that basis that either a new site be found for the detention facility or a massive data recovery project be undertaken. Minor mitigation was recommended on the western portion of the block, which was planned for construction of a courthouse. Based on the intensive survey report and the high projected costs for mitigation, the detention facility site was shifted from the southeast to northeast quadrant of the block. Interagency Archeological Services-Atlanta was brought into the project at that point by officials of the Economic Development Agency and the Chowan County Commission.

The mitigation project for the courthouse site was advertised by IAS-Atlanta in the Commerce Business Daily, and SSI prepared the successful proposal. The provisions of the mitigation contract required that extensive testing be conducted as an adjunct to excavations on the proposed courthouse site. The excavation on the courthouse site was conducted from August 15 through September 16, 1977. That excavation did uncover minor remains associated with eighteenth century activities, but the bulk of the remains investigated dated to the nineteenth and twentieth centuries (Garrow, Haecker and Hurry 1978).

Testing operations were conducted on the new detention facility site in late August, 1977. The site was investigated through application of both auger tests and test trenches, and the primary goal of the testing was to locate remains of the Snuff and Tobacco Manufacture believed to be present in that area. A substantial cellar hole was located beneath the standing J. Edwin Bufflap house during these investigations. It was estimated that the cellar was approximately 15 feet square and 5 feet deep. The location of the cellar and artifacts recovered from the fill suggested a reasonable possibility that the feature was associated with the eighteenth century Snuff and Tobacco Manufacture.

Additional testing was conducted approximately 80 feet south of the cellar in an area slated to be disturbed by construction of an exercise yard for the detention facility. A trench was placed across the linear brick filled feature found during the earlier intensive survey. It was believed on the basis of the testing that this feature indeed represented a robbed wall associated with the eighteenth century tannery.

The presence of these remains on the proposed development site necessitated archaeological excavation prior to construction. The location of both features suggested a relationship with the above-mentioned eighteenth century industrial activities. The research

design developed for this excavation concentrated upon the positive identification of these remains. The hypothesis was advanced that the industrial operations would have left distinctive evidence in the ground which could be isolated. In addition, a land use hypothesis (Garrow, Haecker and Hurry 1978) developed for the courthouse site was to be further tested through this work. The limited area of the detention center facility, however, restricted the evaluation of the use of this side of the block.

Excavation of the tannery area revealed that the tested feature was not associated with the eighteenth century operation. Rather, it was determined that it was a back-filled, wood lined and brick bottomed drainage ditch which had probably served a structure facing Court Street in the late nineteenth century.

As noted in greater detail in the body of the report, the cellar proved to be considerably larger than originally estimated, extending 35 feet north-south and 12 feet east-west. Fill in the cellar indicated that the structure had been abandoned late in the eighteenth century and had remained open, accumulating fill, perhaps as late as ca. 1820. Architectural evidence indicated the structure had seen several periods of construction or repair, one of which could be dated after ca. 1770. Evidence from ethnobotanical remains was inconclusive in determining the function of the cellar (Appendix A). A paucity of historical documentation for the ownership of the property during the critical years between 1769 and 1782 left open the question of whether the Tobacco Manufacture had continued in use after it was sold at a sheriff's sale in 1769. A further analysis of the filling of the cellar indicated that the structure had been in use until sometime after ca. 1790, and perhaps as late as 1800.

The results of the excavation in terms of the research design, therefore, were inconclusive. No definite evidence could be isolated to connect the structure to the short-lived industry; but, on the other hand, no evidence was found to conclusively reject that interpretation.

II. HISTORICAL BACKGROUND

Although Edenton was incorporated by act of the North Carolina General Assembly in 1712 (Parramore 1967:15), there is no documentary evidence prior to 1754 for the development on the detention center facility site. The town had been originally surveyed into long, narrow lots running north to south. As was common in the eighteenth century, when the lots were sold, there was a provision requiring the construction of habitable buildings within a certain period of time, usually two years. Failure to develop the property resulted in the lots reverting to the town commissioners for redistribution.

The courthouse and detention facility block encompassed several of these "old plots", including numbers 58, 59, 60, 61, 62, and a portion of 63. At that time Court Street did not exist, so that lot 63 was contiguous with lot 64. The center lots of the block (i.e., the eastern portion of lot 59, the whole of lot 60, and the western portion of lot 61) were located in a natural ravine or slough. It is probable that this natural feature greatly affected the subsequent development and use of the property.

The first transaction recorded in the Chowan County records concerning these lots is the transferral of lots 60 through 65 (all contiguous) from the "commissioners" to John Craven, "a practitioner in physic and surgery", on October 18, 1754 (Chowan County Record of Deeds G-1:296) (Fig. 2). It is unclear to what use Craven put this property, though the fact that he held it for three years suggests that improvements were made.

On October 8, 1757, Joshua Bodley, Thomas Barker, George Brownrigg, Charles Blount, Joseph Hewes, and William Jackson formed a corporation to operate a tanyard (Chowan County Record of Deeds K-1:93) (Fig. 3). Twenty days later, Craven transferred all of the above-mentioned lots (60 through 65) to this corporation for a sum of £27, a considerable increase in value since his original purchase (Chowan County Record of Deeds K-1:121). Over the succeeding nine years there are numerous deeds recording changes in the joint ownership of the tanyard. Throughout the deeds the name "William Jackson, Tanner" remains constant, indicating conclusively that he was responsible for the day-to-day operations of the business. The deeds record the presence on the lots of "houses", "improvements", "Hydes", "leather", "burning lime", "tar pits" (note: this may be "tan" pits), "buildings", "Negroes", et cetera. It is also clear that the business thrived during those nine years from its modest start to the point in 1763 when Jackson gave

1754-
1757

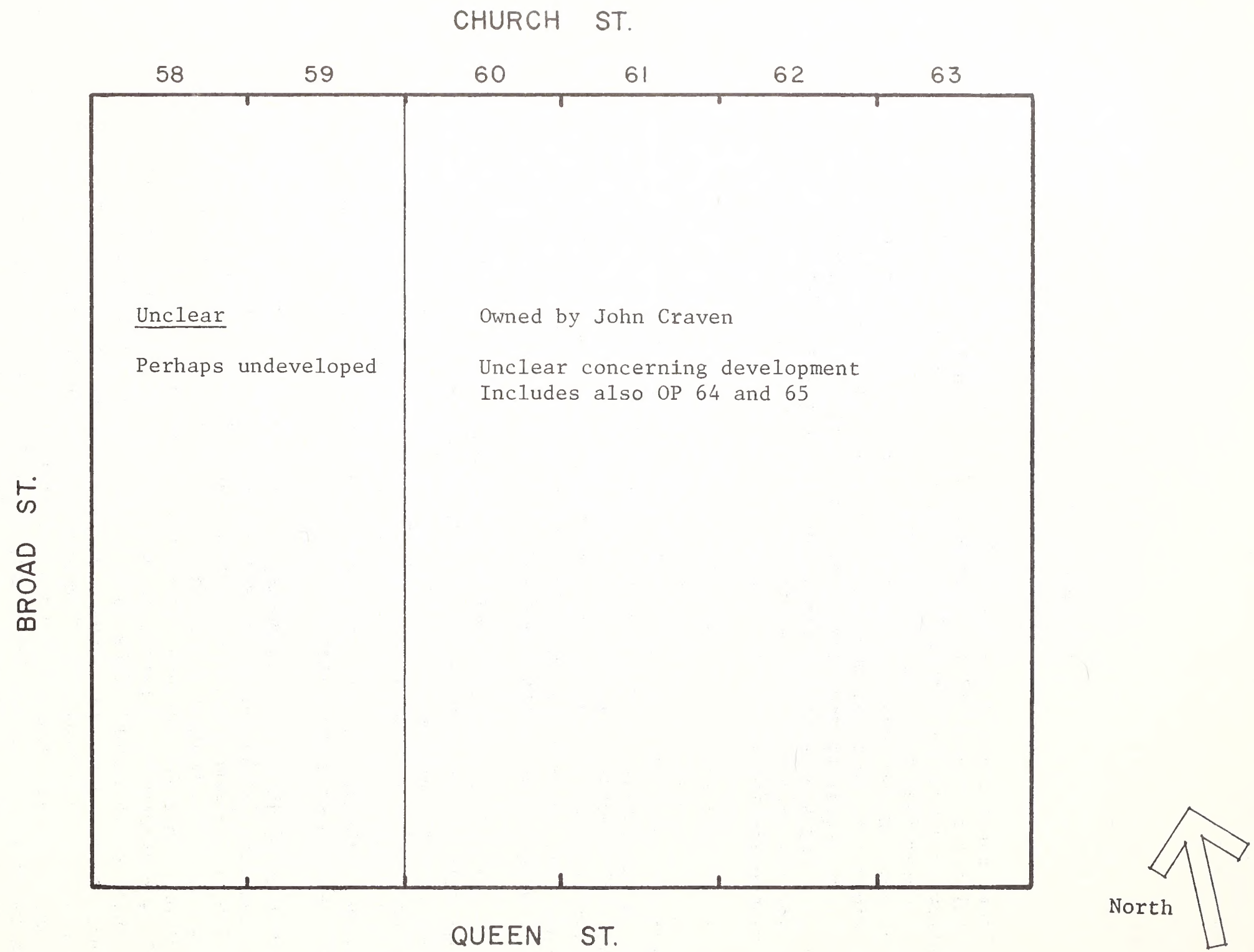


Figure 2

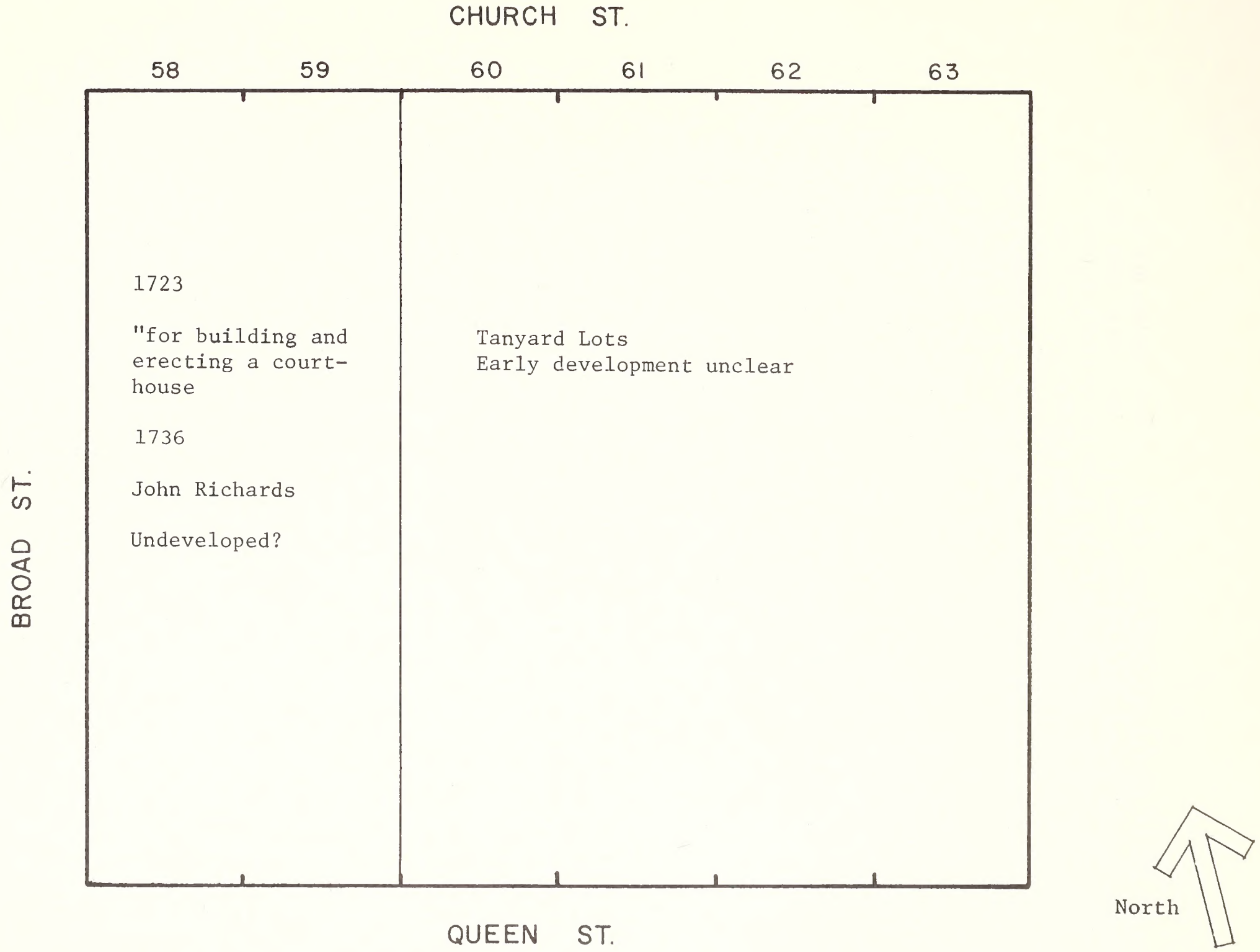

1757
CHURCH ST.
58
59
60
61
62
63
1723
"for building and erecting a court-house
1736
John Richards
Undeveloped?
Tanyard Lots
Early development unclear
BROAD ST.
QUEEN ST.
North

Figure 3

control of the business to Samuel Swift. A deed dated April 11, 1763 (Chowan County Record of Deeds M-1:47) indicates that Jackson may have had to sell out to Swift in order to pay off an outstanding debt. Later deeds refer to the tanyard as "William Jackson and Co.", which would indicate that Jackson, though having lost financial control of the business, remained the proprietor and tanner.

A September 23, 1763, deed (Chowan County Record of Deeds M-1:70) provides the first indication of the presence on the tanyard lots of a Snuff and Tobacco Manufacture, with Swift giving William Halsey one-fourth interest in a "Tobacco Manufactury". The deed does not specify the location of the business. It seems evident from the wording of the deed that the business was in operation prior to that date.

Unfortunately, the early deeds related to this business are confusing, making it difficult to determine exactly when and where it was established and who had controlling interest. This problem is clarified somewhat in an August 1, 1764, transaction in which William Jackson and Co. leased to Halsey, for 20 shillings per year, a part of the tanyard lots defined as a piece of land 100 feet by 133 feet located on Church Street (Fig. 4). From this deed it appears that the earlier deed merely gave Halsey an interest in the operation and the specific building being used, while this one gave him the land around the building (Chowan County Record of Deeds N-1:71).

Deeds recorded in 1765 and 1767 indicated that Halsey (who by this time had acquired considerable interest in the tanyard as well as the Tobacco Manufacture) was slipping into severe financial problems. He had apparently amassed a debt of nearly 1100 pounds sterling to Joseph Blount, which was being paid off by yielding interest in the tannery and other properties in Edenton (Chowan County Record of Deeds N-1:41 and N-1:203). Finally, on May 3, 1769, Halsey's claim to the Snuff and Tobacco Manufacture was turned over to Samuel Swift for a debt of 1360 pounds sterling (Chowan County Record of Deeds N-1:205). The fact that this sale was administered by Thomas Bonner, Sheriff, would indicate that Halsey had fallen to the depths of indebtedness, and one may reasonably argue that the Tobacco Manufacture had not been a successful enterprise. On the same day, there is recorded evidence that Swift had left the country, leaving the power of attorney with his wife, Ann (Chowan County Record of Deeds O-1:73). It may be significant that the document mentions a "house" on the property bought at "vendue of Thomas Benbury (sic), Sheriff, which belonged to William Halsey." There is little doubt that this refers to the Snuff and Tobacco Manufacture, and the mention of a house could be indicative of both industrial and domestic use.

Circa
1764

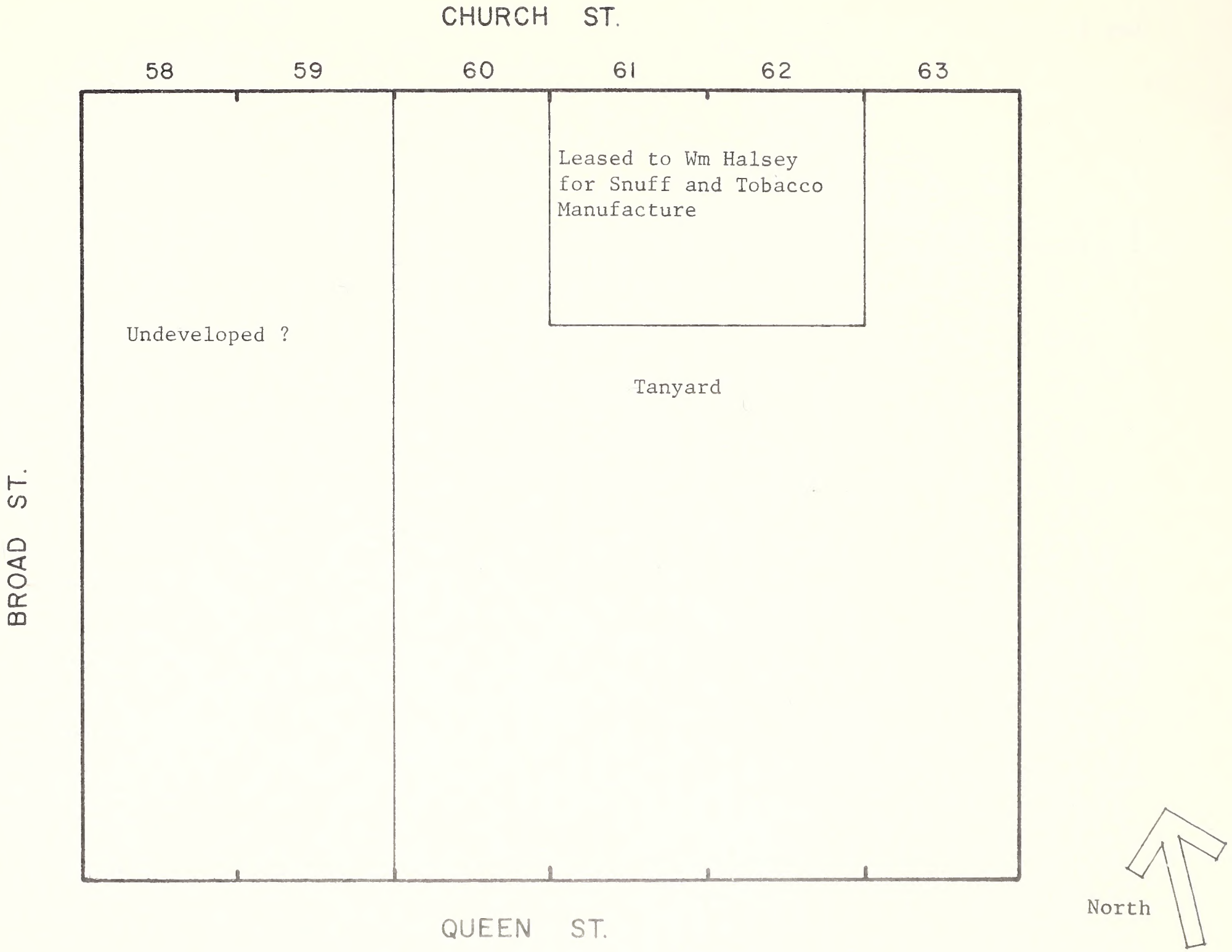


Figure 4

Unfortunately, the records remain stubbornly mute concerning the fate of the Snuff and Tobacco Manufacture. No further mention of it occurs, and it may be reasonable to postulate that it merely slipped silently into obscurity after Halsey had been bought out.

Shortly after this transaction, J. Sauthier, a cartographer for the British Army, visited Edenton and produced a detailed map of the town showing all buildings, gardens, and natural features (Fig. 5). One of the most prominent features on this map is the tanyard, which is shown as a large complex of buildings located in the southeast corner of the present study area. The map locates the tanning pits, a large pond which was probably impounded to provide the necessary water for the operation of the tannery, and an apparently habitable structure fronting on Church Street. Considering the location of this structure on the map, and the description in the previously mentioned 1764 deed of the location of the Snuff and Tobacco Manufacture, it is most likely that the pictured structure was, in fact, the industrial operation. The building is shown fronting directly on the street and is a large L-shaped structure. Behind the building are two small garden plots and a small outbuilding. Although the scale of the map is not fully reliable, it is more than coincidental that the back line of the garden plot is almost exactly 100 feet from Church Street, the exact measurement given in the 1764 deed. It may be argued that the presence of the garden plots indicates the structure was being used as a domicile.

A November 1, 1769, deed records the "quit-claim" of Samuel Swift on property mortgaged by Jackson to Swift on April 11, 1763, thus reverting control of the tanyard to Jackson (Chowan County Record of Deeds O-1:151). It is reasonable to assume that the Tobacco Manufacture property had been reincorporated into the tanyard lots by this time. The tax lists for Edenton in 1777 make no mention of property owned by Jackson, though the 1779 list mentions Joseph Blount's one-third interest in the tanyard. It may be that the business was no longer in operation, though there is no documentary evidence for its demise.

The next mention of the tanyard lots occurs in the 1782 will of Samuel Black, who had acquired the entire tanyard complex sometime between 1769 and 1782 (Fig. 6). No deeds are recorded to document this acquisition. A May 14, 1800, deed records the transferral of old plots 66, 65, 64, and a portion of 63 to Samuel Johnston and the trustees of the Edenton Academy (Chowan County Record of Deeds B-2:176). Sometime after his death, this property was divided between Samuel Black's two daughters. No date is recorded for this division, though it apparently took place shortly after ca. 1800. When this division of the lots was made, daughter Elizabeth Black Young acquired the western 171 feet, including old plots 60 and 61, and 39 feet of 62. The remainder of the property, up to the Edenton Academy lots, was given to daughter Dorothy Black Roberts (Fig. 7).

1769 from Sauthier Map

Location of structures and pond approximate. Boundary lines from chain of title.

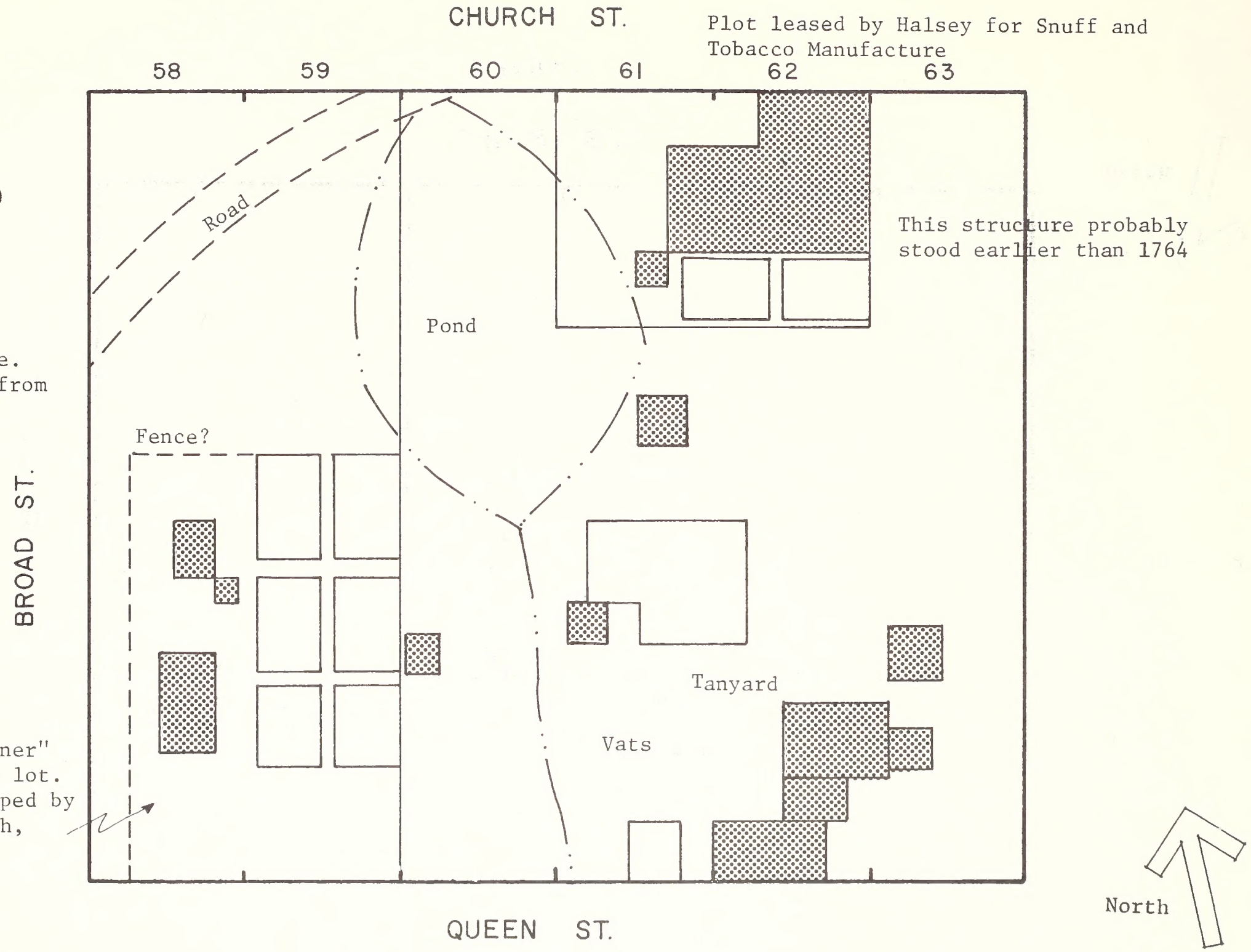


Figure 5

1778-
1786

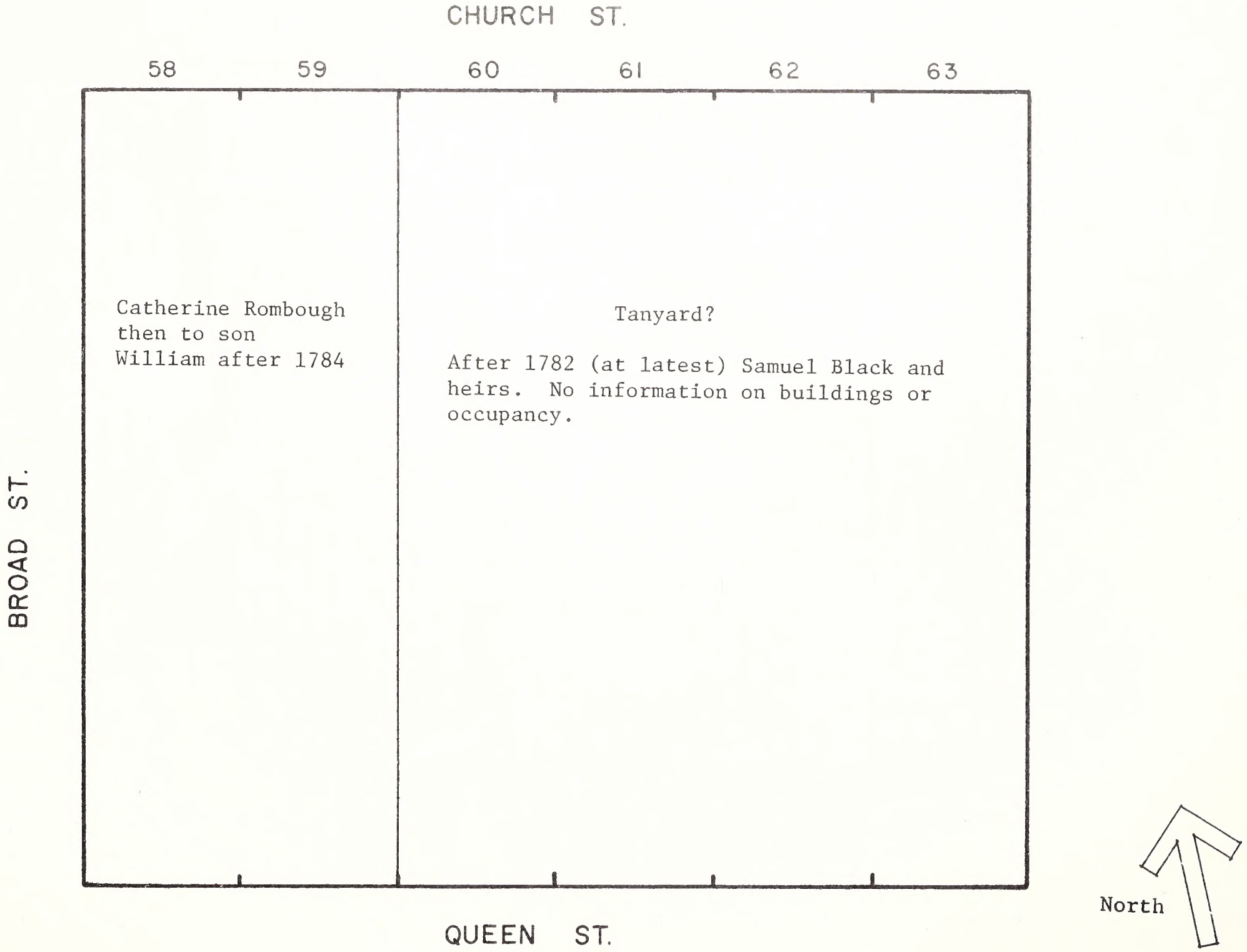


Figure 6

Circa
1800

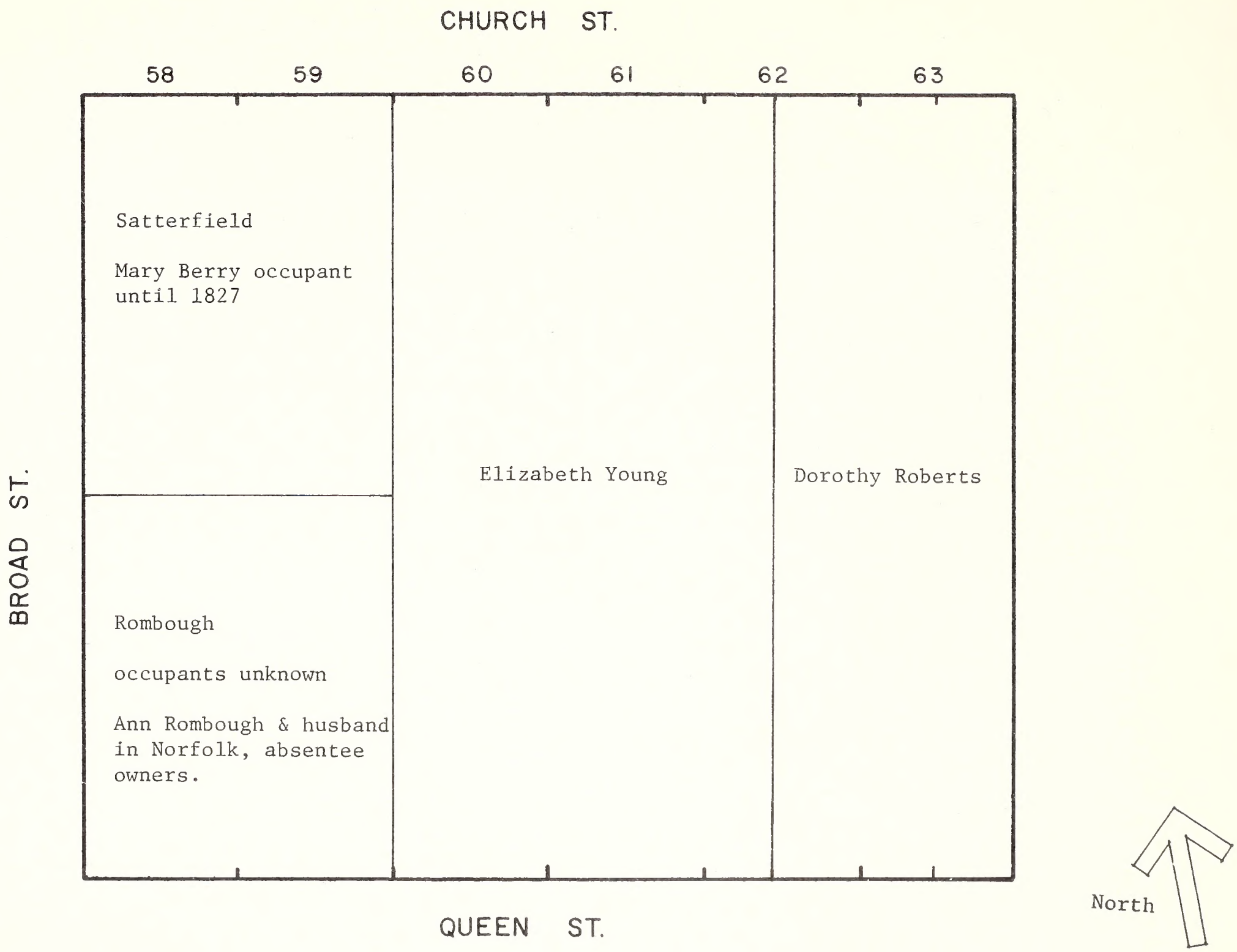


Figure 7

In 1819, the eastern division was transferred to Joseph B. Skinner (Chowan County Record of Deeds H-2:537). The western division was sold by Henry Donaldson, the executor of Samuel Clarkson's (Elizabeth Young's son by an earlier marriage) estate to James R. Creecy on January 21, 1820 (Chowan County Record of Deeds H-2:217) (Fig. 8). This deed specifically mentions a stone foundation on Queen Street, possibly the remains of one of the tannery buildings. The deed does not mention, however, any standing structures. It may be reasonable to assume, therefore, that by 1820 both the tanyard facilities and the Tobacco Manufacture were no longer extant.

It is obvious that the historical documentation sheds little light on the development, use, and demise of the two industries on the study area. Aside from the 1769 map of Edenton, there is no reliable historical data relating to structures on the properties. The poorest documentation for the western half of the block is, perhaps, for the important period from 1769 to ca. 1800. During that time span the tanyard and, possibly, the Snuff and Tobacco Manufacture ceased operations and were replaced by unknown owners and occupants. No evidence is available concerning the fate of these industrial operations, though certainly by 1820 little evidence remained for either. Deeds for these properties continue to refer to them as the "Tanyard Lots" as late as 1837 (Chowan County Record of Deeds L-2:371). Structures are not indicated for the western division of the property in any of these later deeds.

In 1826, Joseph B. Skinner sold a 19 foot strip of land from the eastern side of lot 63 to the town commissioners (Chowan County Record of Deeds H-2:449). This strip became an alley between the "tanyard" properties and the Edenton Academy. Later it became the present Court Street (Fig. 8).

Thomas Manning's property was sold in 1849 at the request of his heirs. Manning had acquired the study area lots in 1830 (Fig. 9). The property was divided at this time, with Alexander Cheshire acquiring:

> Land in old plot, beginning at a point along Queen Street 85 1/2 feet E of SE corner of OP 59, then east along Queen St. 85 1/2 feet to point in OP 62 within 10 feet of stone foundation of chimney, then north parallel with Broad St. to Church St., then west along Church St. 85 1/2 feet to a point in OP 61, then S parallel with west line of OP 61 to first station (Chowan County Record of Deeds O-2:299).

This division of the old plots cuts through the area which previously had been the location of the Tobacco Manufacture. Later that same year the property to the east of Cheshire's was deeded to Henry A. Bond (Chowan County Record of Deeds P-2:31). In 1855, Bond sold that piece of property to William R. Nixon (Chowan County Record of Deeds Q-2:139) (Fig. 10).

1819-
1828

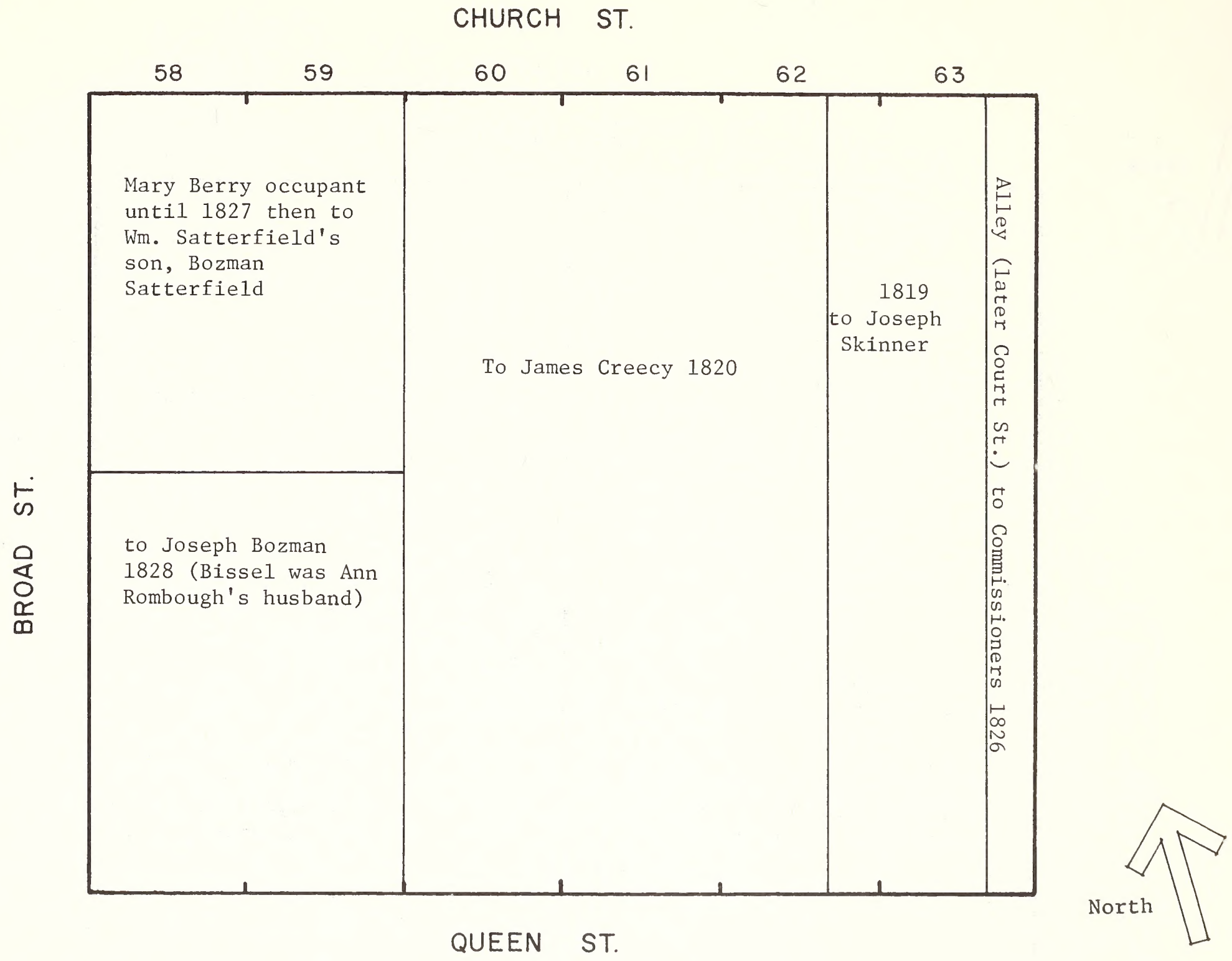


Figure 8

1829-
1849

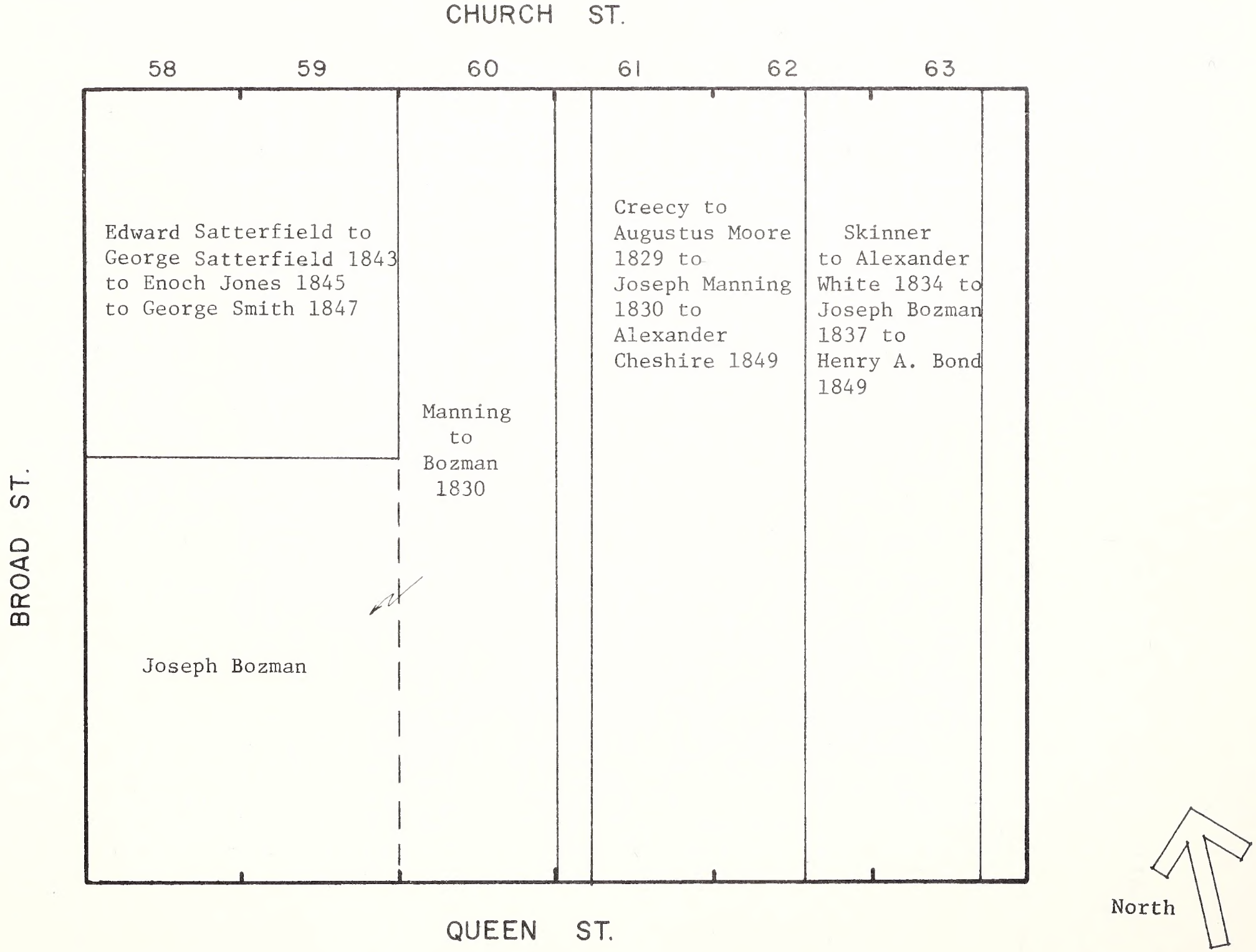


Figure 9

1850-
1860

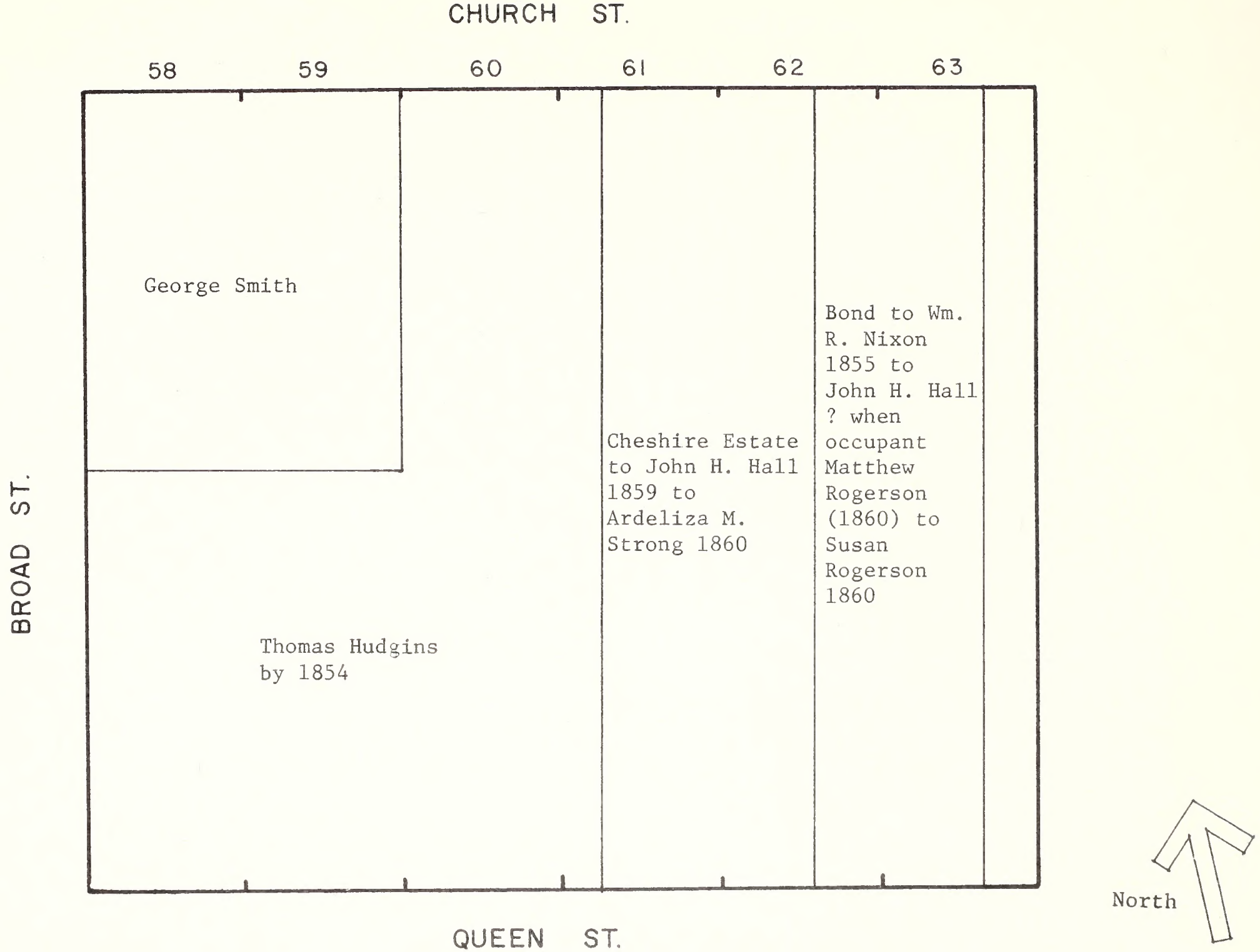


Figure 10

Alexander Cheshire's estate was sold to John T. Hall. The deed for that transaction (Chowan County Record of Deeds Q-2:253) notes the presence of improvements on the property. An 1860 deed transferred this same property to Ardeliza M. Strong, again with mention of improvements (Chowan County Record of Deeds Q-2:609). This deed also notes that Matthew Rogerson was living on the eastern division, then owned by John T. Hall. The Rogerson family acquired that property from Hall by deed of October 16, 1860 (Chowan County Record of Deeds R-2:5).

Until 1899, all of the major property divisions occurred along lines parallel to the north-south old plot lines, thus retaining the long narrow plats. In that year, however, James H. Robinson (or Robertson, the records are ambiguous) bought a piece of property:

> beginning at the corner of Church and Jail St. (now Court St.), then S along Jail St. 77 feet, then west parallel with Church St. ca. 60 feet to Armestead Daves' line, then N along Daves' line 77 feet to Church St., then E along Church St. to the beginning (Chowan County Record of Deeds B-3:101).

It should be noted that there is no record of Daves' acquisition of Ardeliza Strong's property. Nor is there record of when Daves (or Strong?) deeded the northern portion of his land to Haywood Pettigrew, though later deeds clearly indicate that such a division had been made prior to 1903, when Gertrude Ricks acquired the southern 220 feet of that lot from the Daves estate (Fig. 11).

During the first twenty years of the present century numerous transactions split, reconsolidated, and then split again the various plots of land in question. The outcome of all these land divisions was a complex of parcels which in no way resembled the original town layout, or for that matter, even the property boundaries of 30 years earlier.

J. Edwin Bufflap acquired a portion of the property fronting Church Street in 1926. Later divisions of the block were made during the twentieth century, resulting in the configuration of the lots present when the block was acquired by Chowan County.

In general, the study of the chain of title from an historical perspective supports the hypothesis that, as Edenton grew, land use became more intense. Parcels of property became much smaller, thus necessitating a greater intensity of occupation. The review of these data strongly argues for a rapid burst of urbanization shortly before the turn of the century, continuing for about twenty years.

1890-
1926

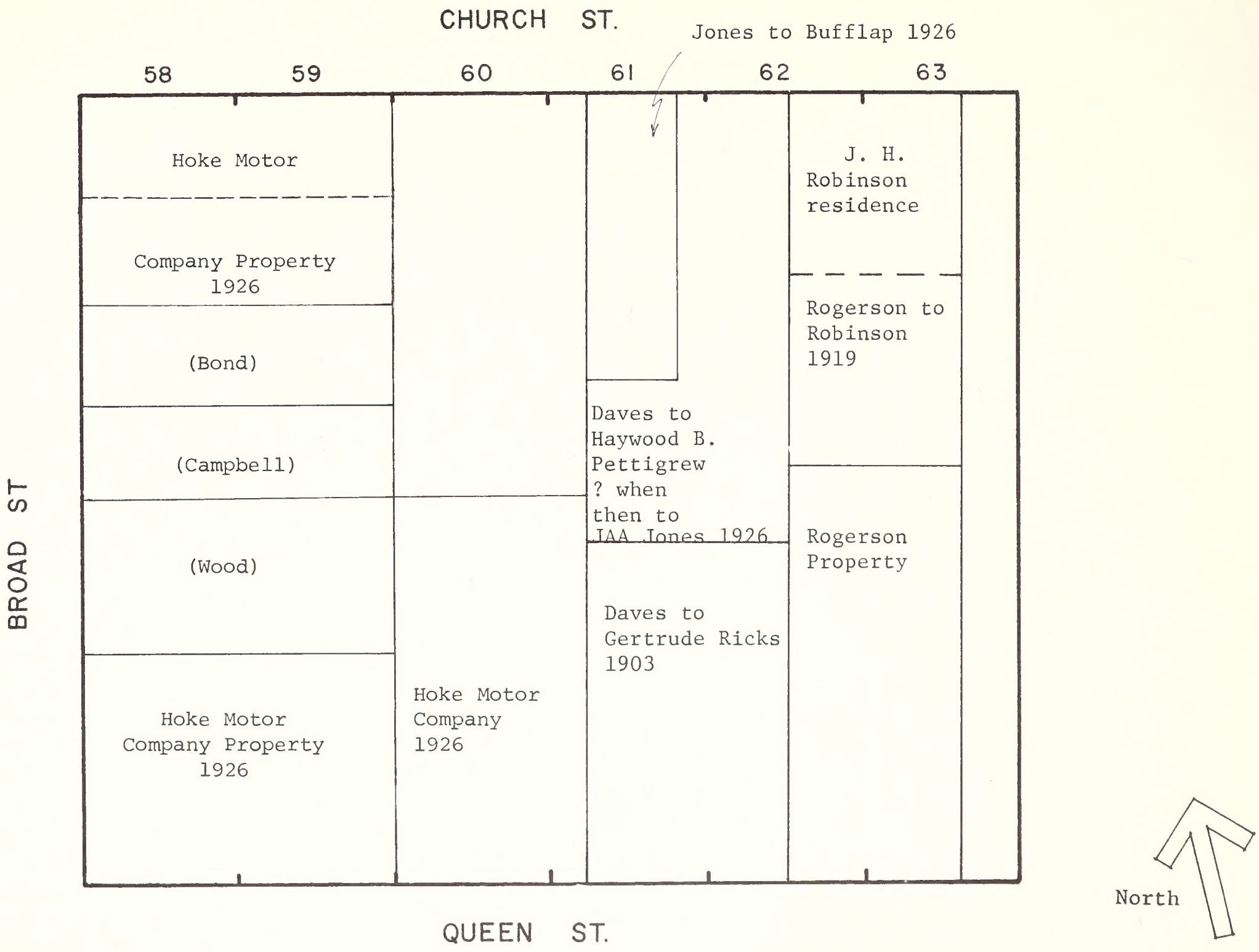


Figure 11

III. THE TANNING AND SNUFF AND TOBACCO INDUSTRIES

Survey of the literature concerning the technology of tanning indicates that little has reached print concerning this industry. Tanning was certainly one of the most important colonial industries, as the need for leather was virtually universal. The tanning of hides was also a mundane subject that attracted few chroniclers.

The description of the technology of tanning that follows was drawn from the two authoritative sources on the subject. The oldest, and most quoted source is L' Encyclopedie; un Dictionnaire Raisonne des Sciences, des Arts et des Metiers by Denis Diderot (1959). Diderot's description dealt with the tanning art in mid-eighteenth century France, but appears to have been applicable to the processes used in the Colonies during the same period. The second major source on tanning technology is titled Tanning in the United States to 1850 by Peter C. Welsh (1964). This work draws together many of the scattered references on the history of tanning and the evolution of the tanning process.

The raw materials required in the tanning process were relatively simple to acquire in a frontier area. The tanning process required large volumes of pure water. The Edenton tannery complex was centered around a small backwater creek that drained into Edenton Bay, and the Sauthier Map of 1769 depicts a dam and small pond on the property. The pond, presumably fed by groundwater controlled springs, would have provided a steady and reliable water source.

Untanned or green hides were obvious raw materials required in the tanning process. Major port cities such as Charleston, South Carolina, received large numbers of wild animal hides from the interior. The Edenton tannery probably depended upon domesticated animals such as cattle, horses, and sheep from the northeast North Carolina region.

Virtually all tanning processes in use in the Colonies in the eighteenth century used ground bark (most often oak) as the primary tanning agent. Twigs and leaf galls were occasionally used, but most often tanneries depended upon bark from the vicinity of the tannery. Various types of bark could have been used in the tanning process, but oak bark appears to have been the desired type in the case of the Edenton tanyard.

Lime was also used in bulk during the preparation of hides for tanning. It was not coincidental that the Edenton tanyard was set up for "Tanning Currying Leather and Burning Lime" (Chowan County

Record of Deeds L-1:3-5). Lime was produced by burning sea shells (oyster shell in the case of recovered examples), and excess lime was probably sold to provide operating capital for the tanyard.

Additional raw materials required in the preparation of hides may have included salt, salt peter, potash, and chicken or pigeon manure. All of these materials (with the possible exception of salt peter) could have been acquired from the Edenton area.

The actual steps followed in the tanning process varied, but the following sequence was probably followed at the Edenton tannery:

1. Wash and clean the green hides. This was done in flowing water or fresh water surface vats.

2. Raise the hides with lime. The hides were immersed in a solution of lime and water in order to loosen the hair and bits of skin and flesh. The hides were normally placed in vats with a weak lime and water solution and progressively moved to stronger solutions. Lime vats could have been placed either above or below ground. The liming process normally took four months to a year.

3. Immerse in bate vats. After completion of the liming process and removal of all hair, the hides were immersed for short periods in vats containing a solution of water, salt, and either chicken or pigeon manure or potash. The purpose of these "bate" vats was to enlarge the pores of the hides so that they would better absorb the tanning liquor. Bate vats were placed above or below ground.

4. Rewash the hides. The hides were thoroughly washed at the end of step 3 to remove the bate solution.

5. Beam the hides. Any remaining hair, tissue, and fat was removed with a beaming tool at this stage.

6. Immerse in the "handler vats". The hides were then placed in an ooze of tanbark and water. These vats were normally placed in a "raising series" of three vats, and the hides were first placed in a weak solution and then moved to progressively stronger ones. Handler vats were normally placed underground.

7. Immerse in the "letches" or "latches". These were true tanning vats, and were much larger than handler vats. The hides were laid out flat at this step and covered with layers of tanbark. The vat was filled with water after being fully loaded with hides and bark.

8. Alternative Step 6A. Large thick hides were placed in "sour liquor" composed of rye and water after removal from the handler vats. This step opened the pores of the hide for more thorough tanning.

9. Dry the hides. The hides were hung in a large shed after removal from the letches or latches. The hides were ready for sale after drying and conditioning.

10. Curry the hides. The final step at some tanyards (including Edenton) was to curry the hides that were to be used for special purposes. Curried hides were used for fine leather products, and currying was simply a process to more completely "finish" the hides.

The tanning process was long and labor intensive. As many as two years were required to adequately tan hides, and tanyards required very large initial financial backing in order to be successful.

Perhaps one of the more frustrating aspects of the historical research was the paucity of information available on tobacco manufacture. This dearth of material extended beyond the Edenton records. Research was conducted at Earl Gregg Swem Library at the College of William and Mary, the Alderman Library at the University of Virginia, and the University of Georgia. None of the research contributed substantive data concerning the social, economic, or political significance of tobacco manufacture in colonial America.

The small amount of information indicates that a large majority of tobacco grown in the Colonies was shipped to England for processing and distribution. This seemingly suggests that British mercantile policy may have discouraged the home production of tobacco as it did other finished products. The British monarchy made the growing of tobacco in England and Ireland illegal to protect the market of the American Colonies. British mercantile policy viewed overseas colonies essentially as extractive enterprises (Quinn, Personal Communication, 1977). There are, however, insufficient data at this time to fully evaluate the situation. It is clear that colonial manufacture of tobacco, i.e., the processing of cured tobacco into a usable product, was not a widespread concern. Placed into a temporal framework, it seems that only an occasional manufacture appears in the records during the early eighteenth century. None were long-lived, and nothing is known of the market. It is not until after ca. 1780 that more substantial operations begin to emerge. The coincidence of this influx with the end of British colonial rule again suggests the colonial policy may have been a restriction on the manufacture.

It is difficult, therefore, to evaluate the position of the Edenton operation. Generally speaking, the lack of evidence can be viewed as a strong indication that the Edenton Snuff and Tobacco Manufacture

was but one of many unsuccessful attempts in the business. By indirect reasoning, it is our opinion that had the operation been successful more information would have been available.

While a complete study of the technological aspects of snuff and tobacco processing is beyond the scope of the present work, a brief summary of the pertinent steps in the process does seem in order. Tobacco arrived at the factory for manufacture already considerably processed. The leaves were often already sorted by grade of quality and either tied (with another tobacco leaf) into "hands" or destemmed (Robert 1938:210). If not destemmed when acquired, the first step in the processing of the leaves into retailable commodities was the removal of the midrib, accomplished by ripping the stringy sinew out of the moistened leaf. Once destemmed, the leaf portion, destined for pipe tobacco and chewing plugs, was seasoned, worked into twisted rolls, heavily compressed, and hung to cure until sale (Diderot 1959, Plate 31). The stem portion was similarly treated, but with different flavoring, aged, and compressed into "carrots" to be sold as snuff. Additionally, snuff appears to have occasionally been made from leaf twists. The equipment necessary for manufacturing tobacco twists was simple and was unlikely to be preserved in the ground. The tobacco wheel was generally of wood, with an upright wheel onto which the leaf twists are rolled. Barrels would be used for seasoning and perhaps fermenting the leaf. Neither of these items would be found archaeologically unless unusual conditions of preservation existed. While evidence of barrels in the form of iron bands is recoverable, associating them specifically with snuff and tobacco manufacturing would be tenuous at best. The press for compressing the tobacco rolls and snuff "carrots" would probably have been a simple affair utilizing either a screw and crank mechanism or a lever press. It seems unlikely that a press which could be put to other uses would be abandoned when a factory was closed. Diderot commented on the simplicity of the processing, saying its major advantage "was that it did not require either complicated machinery or unusually intelligent workmen" (Diderot 1959, Plate 32). Archaeologically, little specific industry related material would remain.

IV. THE DETENTION CENTER SITE

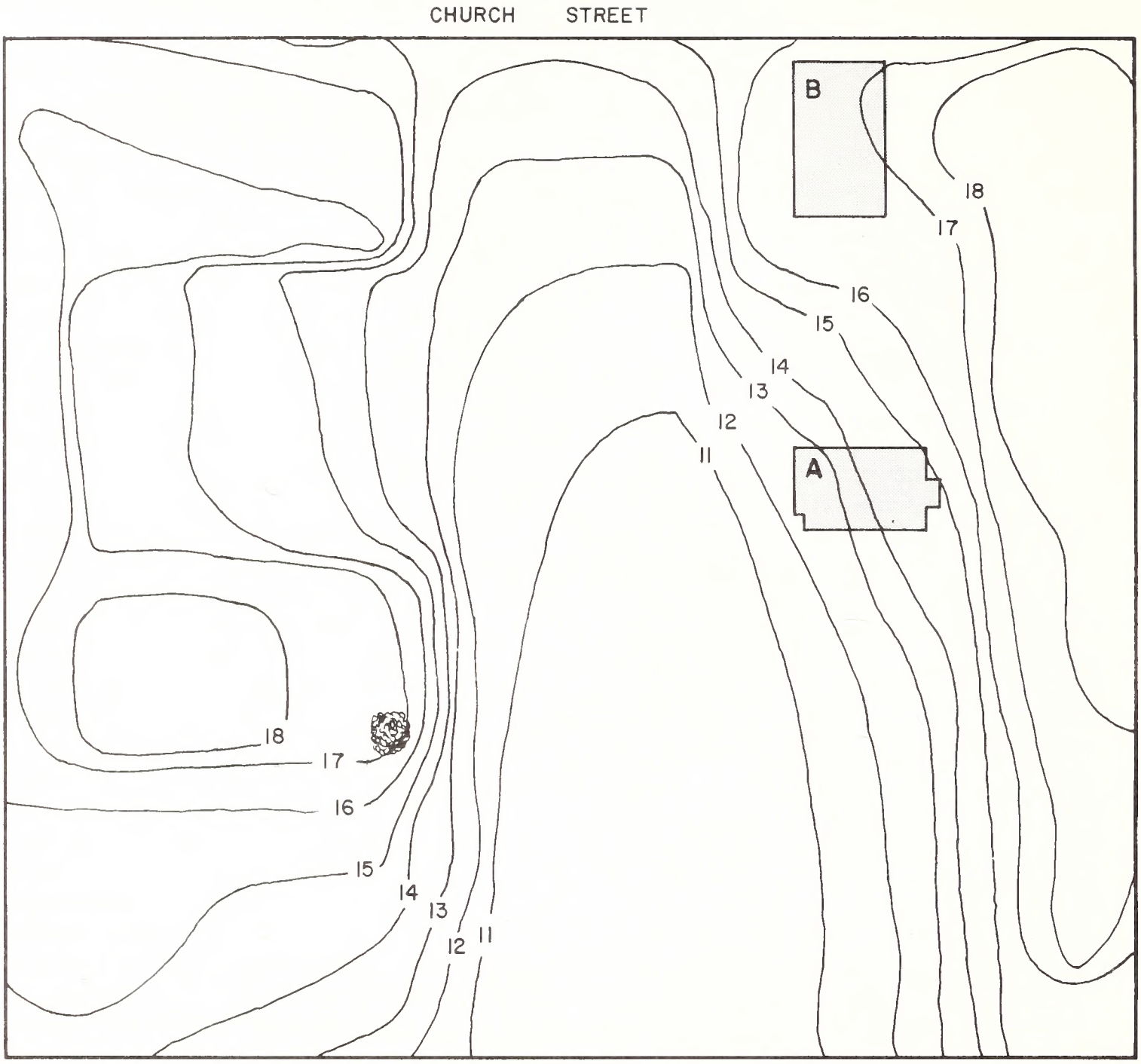
Archaeological excavations on the site of the proposed Chowan County Detention Center Facility were conducted between October 17 and December 1, 1977. As indicated in preceding sections of this report, prior survey had suggested that the planned facility would impact archaeological remains believed to be associated with eighteenth century industrial activities. The research design developed for the excavation was aimed at positive identification of these remains by use of archaeological dating methods, soil analysis, and soil flotation (Garrow 1977). In addition, as the project progressed, further questions were asked of the data in an attempt to fully interpret the findings.

The work reported herein was conducted in two areas within the expected impact zone. Area A was located roughly in the center of the block where test excavations had revealed the remains of a brick feature interpreted as a robbed wall associated with the eighteenth century tanyard located in that general area (Fig. 12). Area B was located fronting on Church Street, and consisted of a cellar hole which had been filled in the late eighteenth and early nineteenth centuries. The location of this cellar closely coincided with a structure shown on a 1769 map of Edenton which was believed to be the site of a Tobacco and Snuff Manufacture. Although both of these areas were excavated under the same proposal, for the purposes of this report they will be treated separately.

Area A

Intensive survey of the proposed detention center facility site was conducted in August, 1977. Probing in the area believed to be the location of the main tannery building revealed a line of brick running east to west. A 2 by 5 foot test unit was placed across the feature. Removal of the topsoil revealed a ca. 18 inch wide trench filled with brown sandy loam cutting through the clay subsoil. Beneath this fill was found a level of handmade brick interspersed with fragments of shell mortar. The brick did not appear purposely laid, and was interpreted as backfill in a robbed wall trench. Although artifacts indicated a late nineteenth century date for the backfill, the near exact coincidence of this feature with the tannery structure was seen as evidence that the early building remained standing through the nineteenth century, perhaps as a ruin, before being dismantled for the building materials.

The research design developed for the excavation of Area A called for stripping of an area 25 by 45 feet encompassing the whole of the probed brick feature. The purpose of this areal excavation



A Detention Center Facility Area A

B Detention Center Facility Area B

FIGURE 12 Overview of Project Area

was to reveal any associated features both inside and outside the tannery building. The master grid for the block was extended to the area and was subdivided into smaller 10 foot grid units. The units were actually excavated as nine foot squares in order to leave one foot balks for the recording of stratigraphy. The excavation proceeded by removal of natural stratigraphic levels.

All of the units were covered by a thin mantle of dark loam topsoil, which varied in depth from 2 inches (at the western extent) to 12 inches (at the eastern extent). Beneath this topsoil was a subsoil of yellowish-red sandy clay, into which several features had been cut. A great deal of root disturbance and north-south plow scars were noted in the subsoil, necessitating in several instances the removal of up to 3 inches of this soil in order to fully ascertain the extent of the features.

Few features, other than the backfilled trench, were encountered in the excavated area. The entire five foot southern strip was heavily disturbed, most likely during demolition operations in recent months. No features were located north of the backfilled trench.

A major feature unearthed during the excavation of Area A was a ca. 12 to 18 inch wide swath of light brown clay loam which ran from the eastern extent of the excavation to a point approximately 4 feet shy of the western edge (Fig. 13). The previously mentioned test trench was situated about halfway up this feature. Probing to the east of the delineated excavation area indicated that the brick feature ended within several feet of the eastern limits of the excavation, so a small extension was added to fully encompass the entire feature.

The fill in this trench was removed by trowel and hand pick. This fill was dry screened through one-fourth inch mesh during the early stages of the excavation. It was discovered, however, that the return of artifacts did not justify the extra time spent, so that the remainder of the fill was merely trowel sorted for artifacts.

As the excavation of the feature progressed, several factors were taken into consideration leading to a revision of the original interpretation as a robbed wall trench:

1) There was a paucity of destruction-related materials in the fill. Under normal circumstances when a wall is robbed of building materials, the resulting trench is used for the deposit of broken bricks and mortar. Such activity would result in large quantities of brick bats and mortar fragments in the fill. The excavated trench, while containing numerous small brick fragments, failed to yield the quantity of masonry rubble expected to be recovered from a filled robber's trench.

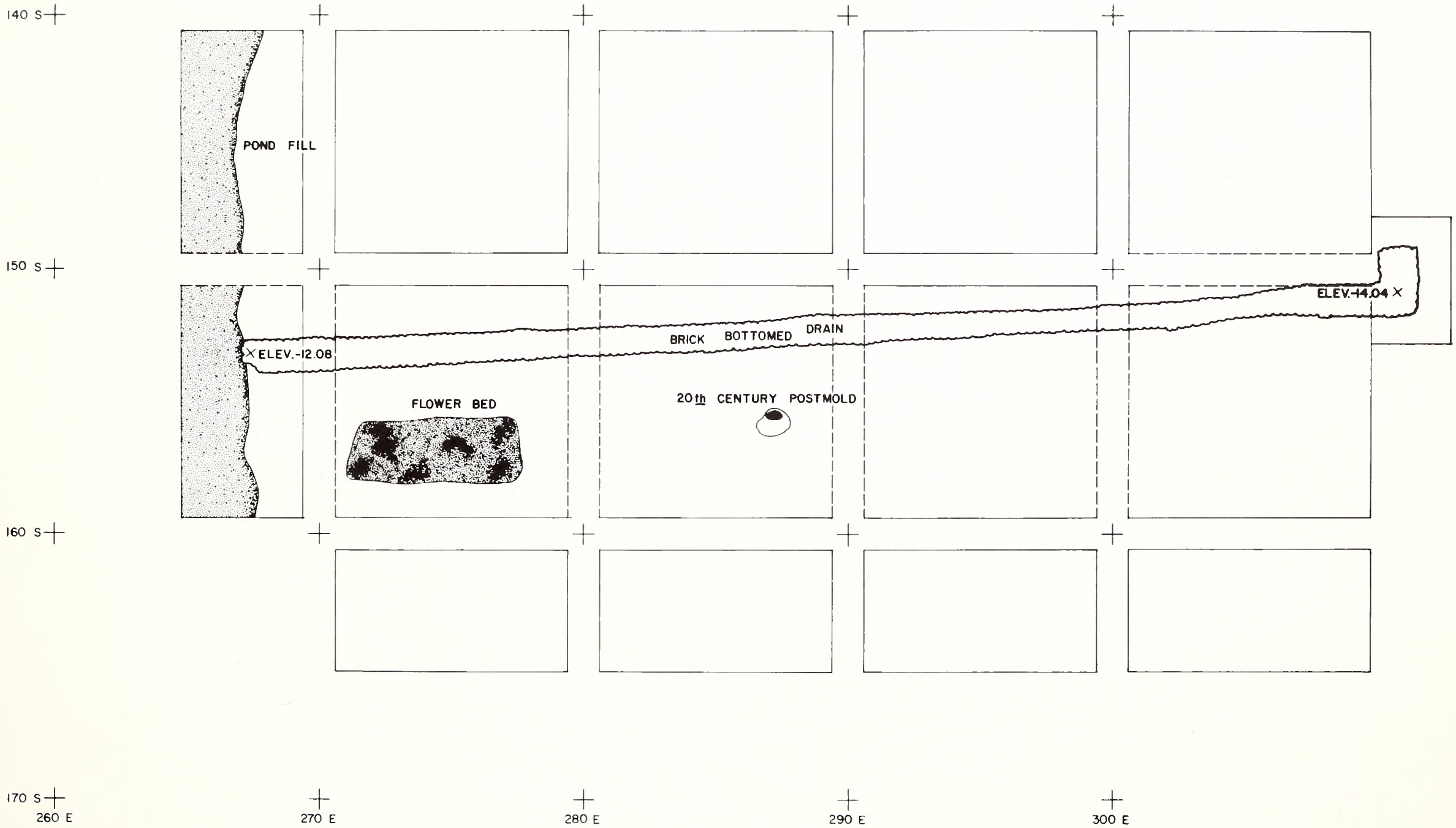


FIGURE 13
AREA A

2) The brick at the base of the fill was found to be laid flat and only one course deep. The orientation of the brick bottom of the trench suggested that rather than being the haphazard discard of broken brick, they had been intentionally laid. In addition, because only broken bricks were used and they were not mortared in place, it seems unlikely that the feature was associated with a structure.

3) The trench had a wooden lining along its entire length (Plate 1). The boards were about 1 inch wide and were laid up vertically (i.e., on edge) on both sides of the trench. The lining was held in place by randomly spaced vertical stakes. Again, such a feature is not typical of robbed wall trenches.

4) Although it was apparent that the brick had ended at its western extremity, there was absolutely no evidence, either structurally or in archaeologically identifiable soil stains, for a turn to either the north or the south. There is little doubt that such a turn would have manifested itself somehow, had it existed.

Having determined that the backfilled trench was not the remains of a foundation, other lines of evidence were used to arrive at a new interpretation of its function:

1) There was a marked slope to the brick. The feature is located on a slight rise running from the eastern ridge to the low bottoms in the center of the block. Elevations taken at both ends of the brick demonstrate a drop in elevation from 14.04 feet above sea level at the eastern end to 12.18 feet above sea level at its western terminus, for an overall drop of 1.86 feet along the feature's 42 foot length.

2) The fill to the west of the feature was similar to that associated with the pond in excavations on the adjacent courthouse site. This same dark brown to gray silty fine loam was located beneath and to the west of the brick's western end.

3) The eastern end of the brick had a configuration which suggested a basin (Plate 2).

These three factors combine to suggest that the feature was a drain which carried runoff water and wastes from a structure located near the eastern end (Plate 3).

Artifacts were generally sparse from the drain fill. Ceramics included a wide range of types, ranging in age from the early to the late nineteenth century (Table 1). Because of an inadequate chronology for later ceramic types, little can be determined from them other than that the trench probably was filled by the late



Plate 1 (left)

View to East Showing Configuration of Entrance to Brick Bottomed Drain, Detention Center Site Area A. Note Rotted Wood Lining.



Plate 2 (center)

View to North Showing Western End of Brick Bottomed Drain (Center) with Dark Brown Silty Sand in Pond or Ravine to Left.



Plate 3 (right)

Overall View to East Showing Entire Brick Bottomed Drain After Excavation.

TABLE 1

Ceramics From Drain Fill

	Number	%
Ironstone, undecorated	9	10.8
Ironstone, relief decorated	1	1.2
Ironstone, transfer printed	2	2.4
Subtotal	12	14.4
Whiteware, undecorated	19	22.9
Whiteware, transfer printed	6	7.2
Subtotal	25	30.1
Yellow ware, annular	8	9.6
Subtotal	8	9.6
Pearlware, undecorated	2	2.4
Pearlware, handpainted	1	1.2
Pearlware, annular	8	9.6
Pearlware, green edge decorated	2	2.4
Pearlware, blue transfer print	1	1.2
Subtotal	14	16.8
Creamware, undecorated	13	15.7
Subtotal	13	15.7
Porcelain, plain white	3	3.6
Porcelain, burned	2	2.4
Porcelain, overglaze decorated	1	1.2
Subtotal	6	7.2
Stoneware, white saltglaze	1	1.2
Stoneware, blue and gray saltglazed	2	2.4
Subtotal	3	3.6
Coarseware, lead glazed	2	2.4
Subtotal	2	2.4
TOTAL	83	99.8

nineteenth century. Several bottle glass fragments and one whole clear pill bottle, however, had mold seams which extended up to the lip, thus indicating a post-1880 date for the fill.

No date was determinable for the drain's construction.

Conclusion--On the basis of archaeological evidence, it is evident that the excavated feature was not the remains of a foundation. Rather, it seems a more plausible interpretation that the feature was a drainage ditch to carry runoff water and waste from a house on Court Street. The 1904 Sanborn Map of Edenton shows such a domestic structure in the approximate location of the drain, and it may be reasonable to associate them.

An alternative interpretation has been forwarded suggesting that the drain may have been associated with the tanyard facility for the purpose of draining the tan vats. For the ditch to have accumulated its artifacts it would have had to stay open for at least sixty years. Since there would have been no impetus after 1820 to keep the ditch cleaned, the sixty year filling period seems tenuous at best. The data, therefore, are equal and contradictory for a single phase filling of a ditch which had to stay open for sixty years.

Area B

Summary of Survey Data--During the intensive survey of the detention center site a series of auger tests were placed around the extant J. Edwin Bufflap house. In addition, a small trowel-dug hole was excavated beneath the house. The hole beneath the house revealed the presence of a deep fill level containing numerous artifacts dating to the late eighteenth century. A 2 by 5 foot test trench was placed to the north of the Bufflap house where auger testing had indicated the corner of the cellar structure. The test encompassed what proved to be the northeast corner of the cellar. The cellar was lined with blocks of coquina-like material. Fill on the inside of the wall consisted of brown sandy loam containing historic ceramics dating after ca. 1780. The excavation of the interior of the structure was hampered by the confined limits of the test, so that the bottom of the fill was not reached. Artifacts from the builder's trench contained white salt-glazed stoneware, dating the coincidence of the feature's location with a structure shown on the 1769 map of Edenton. The archaeological dating evidence, which placed the cellar within the time span expected for the Snuff and Tobacco Manufacture known to have been located there, led to an interpretation that the cellar was possibly associated with that short-lived industrial activity. Though the cellar was estimated to be at least 15 by 15 feet, the southern end was obscured by the presence of the Bufflap structure.

North Carolina State Library
Raleigh
N. C.
Doc.

Archaeological Methods--The Bufflap house was removed from the site on October 21, 1977, allowing for the first look at the section beneath the house. The master grid for the block was extended to the area and a 30 foot square was laid out above the feature. Topsoil and refuse overburden were removed from the cellar using 10 foot squares for horizontal control. The topsoil was not screened and artifacts were removed by visual inspection of the soil as it was shovelled. The most important discovery of the stripping phase was that the cellar was considerably larger than had been expected. Rather than falling within the 15 by 15 foot estimate, it was discovered that the feature extended southward to the southern wall of the Bufflap house--a total length of 35 feet. This drastic change in the scope of the excavation necessarily led to revision in the planned methods. The most critical of these changes was to remove the fill by shovel rather than trowel. Even with this more rapid method for fill removal, time constraints imposed by construction scheduling resulted in the entire excavation time being spent working on the cellar with no time allowed to locate structural evidence for the cellar's superstructure.

After exposure, the cellar and intrusive features were mapped (Fig. 14). All intrusive features were removed and the cellar was subdivided into six unequal segments for excavation. The unequal lots were chosen in order to maintain balks free of modern intrusions and to avoid placing a balk over possible cross walls. As the excavation proceeded it was noted that the central section was far too large to be efficiently managed. To resolve this difficulty, the western side of the central area was divided into two units, thus providing tighter horizontal control. Soil was removed as closely as possible by natural stratigraphic levels so that a chronology for the cellar's backfilling could be established. As the soil was shovelled from the units it was visually sorted for large artifacts and then transported to a series of screens for water screening. Though the screening process consumed time and provided the major difficulty in the excavation, the method resulted in the recovery of virtually all artifacts larger than one-fourth inch. Time constraints near the end of the project precluded screening of material from the balks.

Introduction to the Analysis

In the archaeology of historic structures there are fundamentally four sources of data: historical, architectural, archaeological, and artifactual. The historical data were discussed in some detail in Chapter II, and need not be reiterated. Architectural data concern information available about the actual structural remains of the building--including evidence of construction methods, renovations, and materials. These data are supplemented with architectural analogy. The archaeological data are derived from

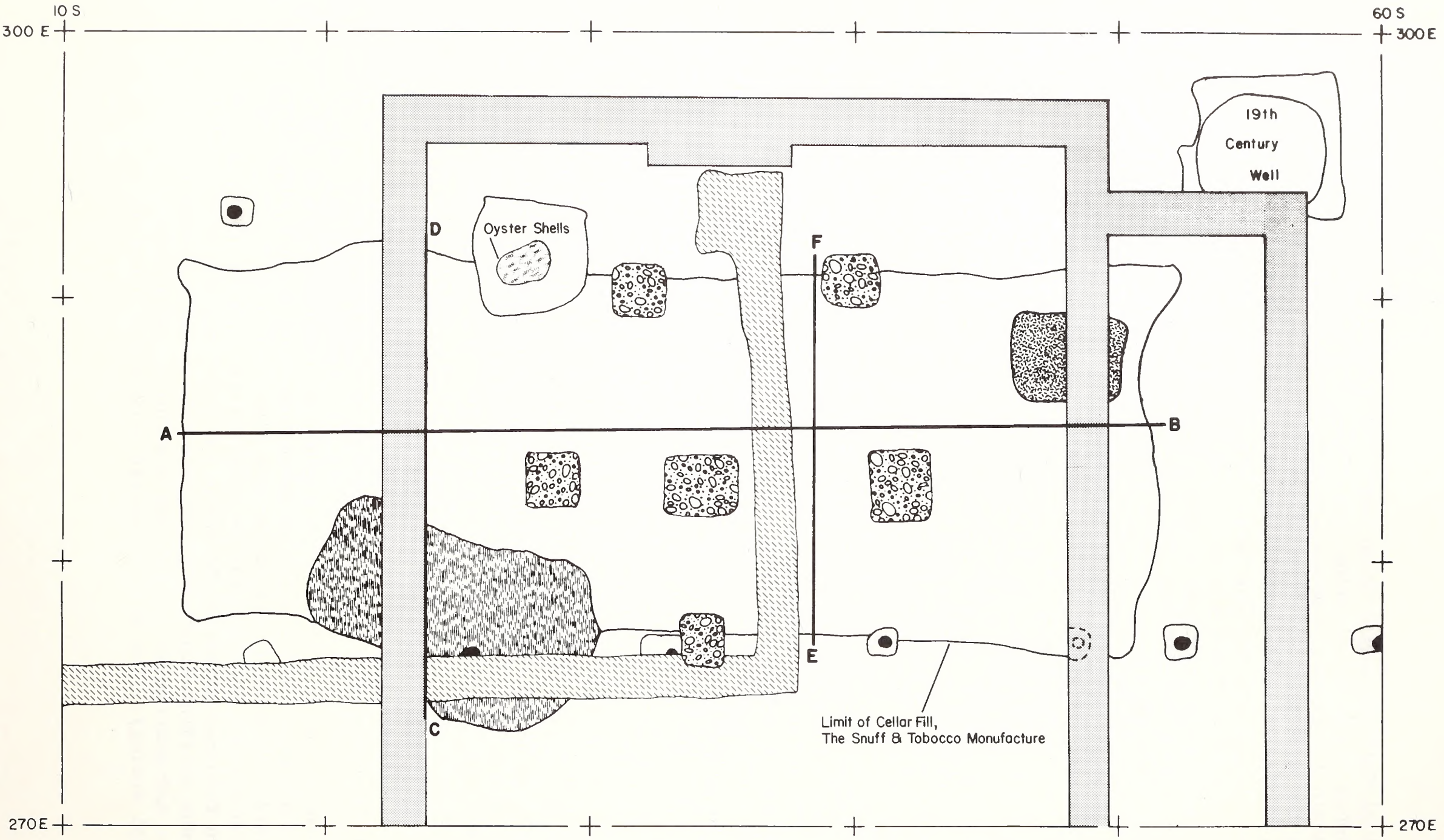


FIGURE 14: Plan of Areo B Below Topsoil

an analysis of the fill within the cellar, the stratigraphic relationships, and chronologic placements. Artifacts provide a wealth of information about the site and its relationship to others. In the present analysis the artifacts were approached on several levels of complexity. At the most basic level, the artifacts were classified and quantified on a piece by piece basis, resulting in catalog sheets which included ceramic sherd counts, glass fragment counts, bone counts, and so on. From this, the analysis moved to a consideration of varying frequencies of different artifact classes to determine the general function of the structure. In order to allow for comparison of the data to other sites of the same period, South's (1977:95-96) classification was utilized. Generally, it is felt by the author that basing comparisons of function on simple counting of artifact pieces is not fully satisfactory. To overcome this problem, the analysis was taken one step further and included a comprehensive analysis of ceramic vessels. The information obtained from this process was used to formulate an hypothesis concerning the source of the fill in the cellar. The hypothesis was then tested by conducting a limited analysis of glass materials.

Architectural Data

Excavation of the fill in the cellar hole revealed several architectural features which aid in the interpretation of the structure's chronology (Fig. 15; Plate 4). The total cellar had dimensions of 34.2 by 13.4 feet. This area was, however, subdivided by a cross wall delimiting a southern section measuring 13.2 by 12.5 feet, and a northern section 21.1 by 13.4 feet. A bulkhead entrance was situated along the western wall of the northern section.

All extant portions of the wall were constructed of the same material. This consisted of blocks of a molded and cut cement-like material. The actual material is not common, and was probably produced locally. It was comprised of finely ground oyster shell and sand, similar to coquina. The blocks were not of a standard size, though all were within the following ranges:

Length:	21 1/2" - 23 1/4"
Width:	9" - 11"
Thickness:	3 1/2" - 5"

It appears that the blocks were cut to approximately the same size, but exact measurements were not maintained. The wall block is extremely porous and crumbles easily.

On the basis of differences in construction technique and mortar type, three different periods of construction or renovation were noted.

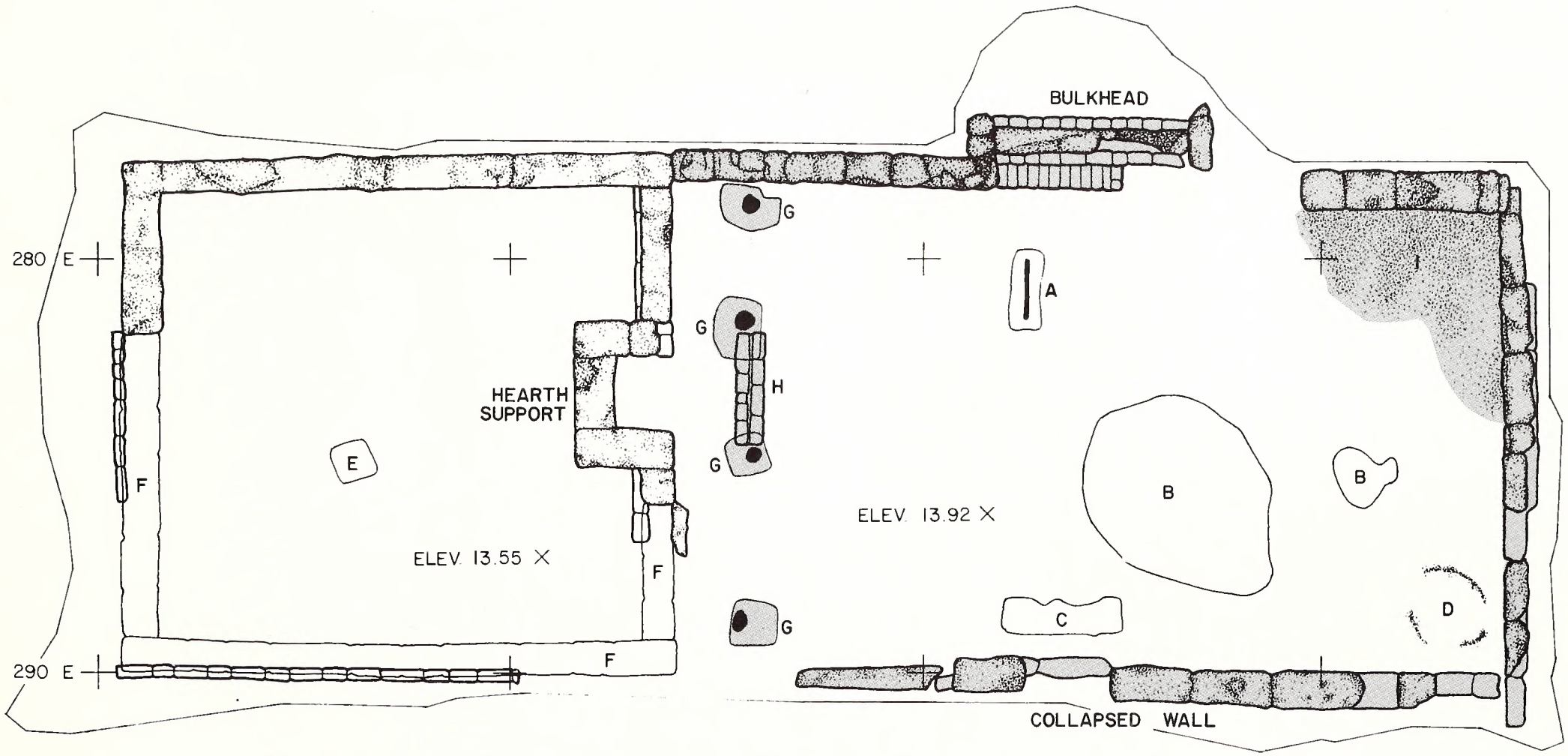


FIGURE 15
CELLAR OF SNUFF AND TOBACCO FACTORY, AREA B, Showing Phase I (Dark Areo), and Phase II, (Light Area).
Also indicated are **A:** Vertical Board
B: Depression
C: Board in Situ
D: Barrel Stain
E: Isolated Post Hole
F: Robbed Wall
G: Post Hole and Mold
H: Brick Underpinning
I: Collapsed Wall Material



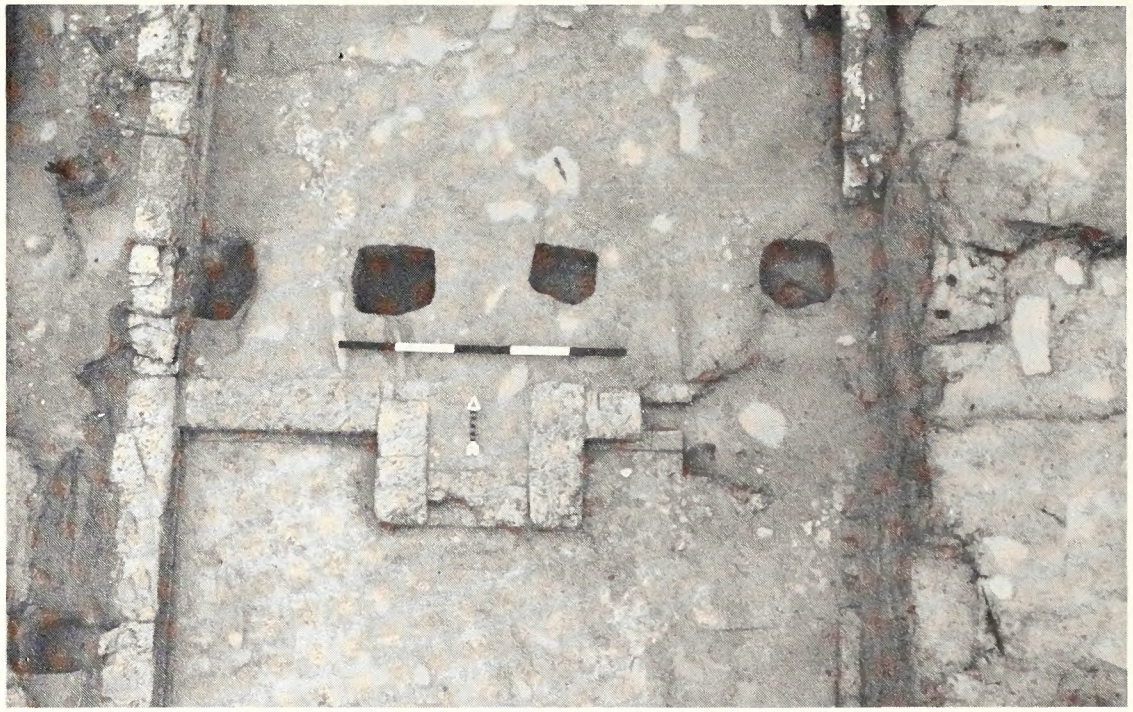




Plate 4 (upper left): Overhead View Showing Entire Cellar Area Near Completion. Note Robbed Wall (Lower Right), North Wall of Phase I Construction (Center), Series of Post Holes (Center), and Bulkhead Entrance (Top Left). Also Notice How the Phase II Construction Does Not Maintain a Straight Line with the Phase I Construction.

Plate 5 (upper right): Overhead View of Central Portion of Cellar Showing Northern Wall of Phase I Construction, Post Holes from Phase II Construction, and Remains of the Robbed Eastern Wall (Right, Bottom). Note that Level of Wall Block Debris and Wash has Not Been Removed from Area South of Wall.

Plate 6 (lower left): Detailed View to North Showing Brick Footing for North Wall of Phase I Construction. Post Holes Behind Scale are from Phase II Construction.

Southern Section--Apparently the earliest construction took place at the southern end of the building (Fig. 15). This assumption is based on the fill in the builder's trench in this area, which contained only a couple of small shattered bone fragments. The wall was contructed by first laying a 1-1/2 course wide brick footing upon which the 'cement' blocks were then laid one course wide. This method of construction was consistent throughout the southern section, including both the cross wall and the robbed sections of the eastern and southern walls, where only faint brick outlines were noted in the subsoil. The mortar used in this construction was hard, dark gray, and contained large fragments of shell.

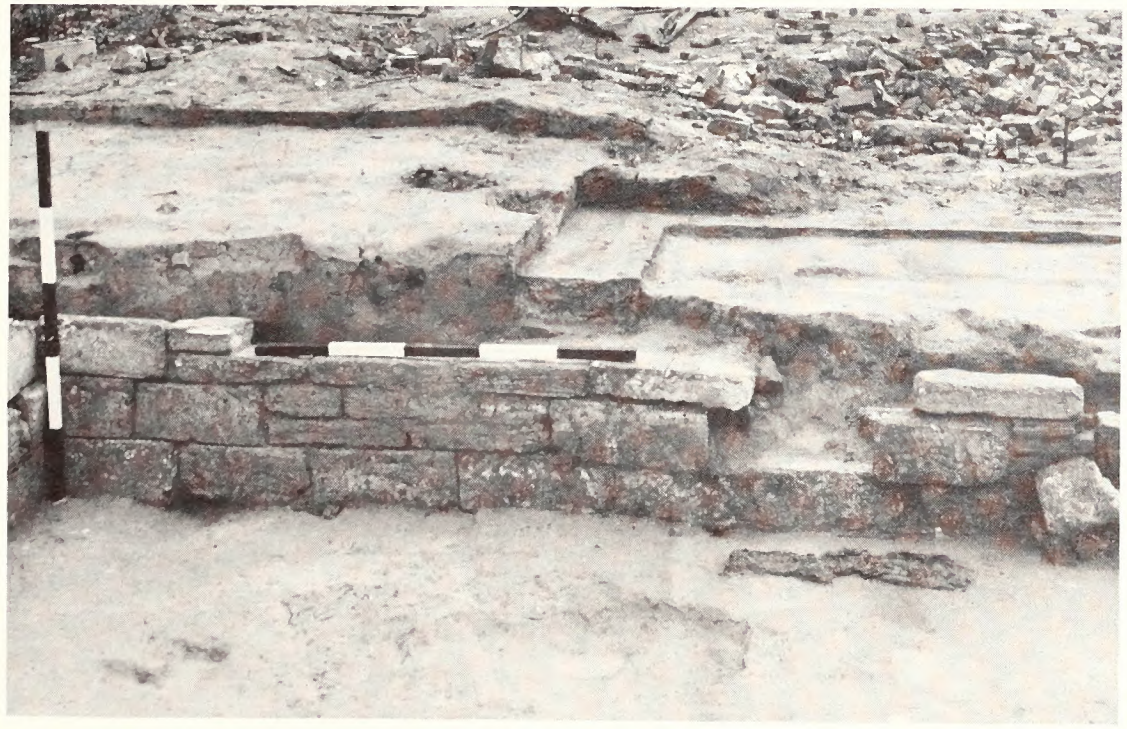
Cross Wall--The northern end of the southern section was delineated by the remains of what originally may have been a retaining wall denoting the northern limit of the cellar (Plate 5). One important feature of this wall was an apparent chimney base support located halfway across the cellar. The chimney base, however, has its opening facing north rather than south. The existence of the chimney base-like structure should not be considered an indication of a fireplace in the cellar, but rather as a buttress to support the added weight from above or as a support for an earthen hearth (Plate 6). An area of disturbed fill, perhaps from erosion of the subsoil, extended beneath the cross wall (77-24-44L) and contained a bottle base dating to around 1760.

The placement of this section of the cellar in relation to the presumed upper building presents many analytic difficulties. An argument can be made that the southern cellar section was excavated and constructed independently of the northern area.

The scale of the Sauthier Map renders its use for detailed measurements tenuous. It does seem possible, however, that the cellar (i.e., the southern section) could have been located near the southern end of the eastern side of the "L". The width of the cellar would not, however, have been sufficient to span the entire structure.

Western Wall (Plate 7)--Extending from the cross wall to the northwest corner of the structure, the wall continues. The mortar used in this section is markedly different from that of the southern section. In addition, this segment of the wall was constructed upon a brick footing comprised of two rows of brick laid on edge on either side of the blocks. The wall is consistently laid with the blocks horizontal. This, along with the presence of the bulkhead entrance on this wall, argues for the west wall being a load bearing wall contiguous with the west side of the upper building.





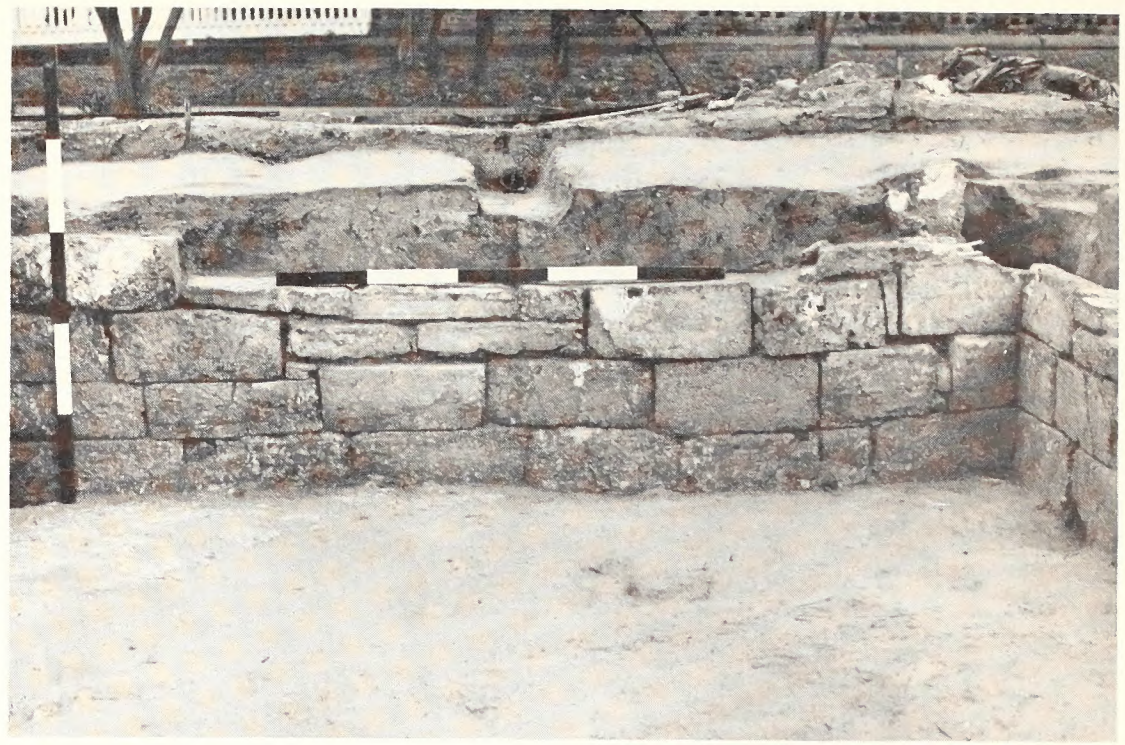


Plate 7 (upper left): View to West Showing West Wall of Cellar and Bulkhead Entrance. Note Later Disturbance which Interrupts the Wall North of the Bulkhead and Cuts Through Bottom Step and Floor Level.

Plate 8 (upper right): View to North Showing Construction Technique for Northern Cellar Wall. Note that Most of this Wall is Constructed by Laying the Blocks on Edge.

Plate 9 (lower left): View to East Showing Eastern Wall of Cellar and Northeast Corner. Note Area where Wall has Washed Out (Right Center); Also How Wall is Constructed by Laying Blocks Both Horizontally and Vertically.

Northern Wall (Plate 8)--The northern wall showed evidence of yet another period of construction. This wall was built with no brick footing, while at the same time artifacts in the builder's trench indicate a date of post ca. 1780 for its construction. This section of the wall is structurally unsound, being built almost entirely of blocks laid on edge. It is also noted that the northeast corner of the cellar is not bonded together, providing further evidence that the cellar walls were not used for structural support.

Eastern Wall (Plate 9)--The eastern wall of the cellar gives further evidence that the cellar walls were not sound. At least two places along the wall had washed out--one of which was plugged with brick (Plate 10), and the other apparently occurring near the end of the building's use. This wall section was constructed directly on the ground, and consists of both horizontally and vertically laid blocks.

Documentary Evidence--The only clues available in the historical record for the existence of a building on the land for the Snuff and Tobacco Manufacture are a brief mention in a 1764 deed and the portrayal of the building on the 1769 Sauthier Maps.

The deed provides little useful information for documenting the type of building present, but does clearly indicate that the structure abutted the eastern property line.

> . . . part of tanyard lots, beginning at N end of sd lots at the Fourth Street, at the corner of tobacco and snuff manufacture now occupied by Halsey, then W along St. 133 ft, then S on a square at right angles with St. 100 ft, then E parallel with Church St. 133 ft, then N to NE corner of said manufacture (Chowan County Record of Deeds N-1:71).

The implication of this document is that Halsey may have been residing in the extant structure. This is not clearly indicated, though the words "now occupied by" would suggest it.

The other document, Sauthier's Map, does provide much helpful information concerning the number of buildings, locations of garden plots and fence lines, and fairly accurate dimensions for property boundaries. The scale is in fathoms, and proves cumbersome to work with at such a large scale (approximately 1" = 800'). The scale therefore breaks down when attempting to obtain specific metrical data about a building. By way of example, the map measurements for St. Paul's Episcopal Church would make it 132 feet long and 84 feet wide. The courthouse measurements, at 66 by 48 feet, are not off by much. It seem reasonable to assume from this that the structures were drawn in approximately their correct location, but the actual dimensions are not to be trusted.







Plate 10 (above, right): Detailed View of East Wall of Cellar Showing Some of the Architectural Evidence for Repairs to that Wall.

Plate 11 (lower left): View to North Showing Southern Side of North Balk. Note Thickness of Rubble Deposit and Wash Levels. Later Disturbance Cuts Through All Cellar Fill Adjacent to Bulkhead Entrance (Upper Left).

Plate 12 (upper left): View to South Showing North Face of Southern Cross Balk. Note Thickness of Dark Loam Level, Pile of Brick Rubble, and Evidence for Robbing of the Eastern Wall (Extreme Left Center).

Can the shapes that are shown be accepted as indicative of structures present? Again, the answer may lie in the presentation of the church and courthouse, both shown with attendant vestibule, nave, and chamber. The proportions are not accurate, nor does it appear that it was Sauthier's intent to make the map absolutely accurate.

The reason for delving into this issue so intensely is to cite other examples of the problem which exists with the dimensions of the "Snuff and Tobacco Manufacture." The map clearly shows a building located on a small fenced lot in approximately the same location as that mentioned in the above deed. The map dimensions for the building would define a building consisting of a large 60 foot square structure with a 30 foot square appendage on the west side. Behind the building (i.e., to the south) are two small garden plots and a small outbuilding (which measures 30 feet on each side according to the map). Extending from the southeast corner of the building, around the garden plots and continuing to the edge of the pond, is a thin line, a symbol used elsewhere on the map to mark established property boundaries, possibly fences.

It is apparent that these dimensions are fully out of proportion to what must have been the real situation. The portrayal of the basic "L" shape of the building is reliable, but the oversized measurements are not. It is important to understand and follow the above argument, for the author wishes to reject the accuracy of the map in order to take another perspective on the architecture.

Without direct historical reference to the building, the archaeologist has turned to the realm of analogy to find an explanation of a phenomenon. The phenomenon being explored here is an oddly dimensioned cellar which contained certain features related to the building above. The argument which follows is based upon a preponderance of evidence from architectural features, archaeological data, and architectural analogy.

In order to provide a reconstruction of the building which stood on the site, it is necessary to make numerous assumptions about the architecture. The following interpretation of the building is, therefore, somewhat conjectural. We believe, however, that archaeological data support the interpretation. Architectural historians have agreed, with reservations, to its architectural feasibility (Edward Chappel, Personal Communication, 1978). The major reservation, expressed by McKelden Smith of the North Carolina Division of Archeology and Preservation, revolved around the removal of the axial chimney and its replacement with lateral ones. However, data refuting this contention will be supplied in the following discussion.

Sometime after ca. 1760 a small one bay frame structure was constructed on the northern end of the tanyard lot, probably to serve as a Snuff and Tobacco Manufacture. The dimensions of this

structure are unknown, though fairly standard dimensions would indicate a square structure approximately 16 feet on each side. The early section of the cellar was located beneath this building. The offset along the northern wall could have served as a support for an earthen hearth or buttresses for chimney support, thus placing the chimney for the structure on the north end. No evidence was found for an entrance into the cellar, so it may be postulated that access was through a trap door in the floor of the structure.

Between this construction phase and compilation of the 1769 Map of Edenton, the building was enlarged to conform to the general shape shown on that map. It is hypothesized that the enlargement involved an expansion of the building from a small one bay industrial locus to a more formidable hall/parlor plan structure, measuring about 16 by 35 feet. Such a plan is a traditional English pattern resulting in a two room division of space (Glassie 1975:75). The cellar was also enlarged, along with the installation of the bulkhead entrance on the western side. This construction phase would have necessitated the removal of the old chimney and hearth support while the chimneys were moved to either end of the newly enlarged structure. It is noted, however, that no evidence (other than the destruction rubble in the fill) was found for these chimneys, and their presumed location is based entirely on architectural analogy. There was also a need for extra support beneath the wall dividing the upper hall and parlor. This support was provided by a series of four posts which are evidenced by post holes that transverse the cellar floor, two feet to the north of the now defunct north wall of the earlier structure. In order to fill the structure out to the "L" shape, an above ground addition was added to the southern end of the building. It may be a reasonable interpretation to associate the addition with a continuance of the snuff and tobacco manufacturing operation while the enlarged structure, with the cellar, may have been utilized as a domicile for either Halsey or workers in the manufacture.

Architectural features indicate that the cellar did not completely underlie the upper structure. Neither the north wall nor the east wall were constructed to support any significant weight, thus indicating that the northern and eastern walls were probably located outside of the cellar area. The occurrence of washed fill along the eastern side of the cellar argues for a close proximity to the edge of the building, however. Assuming a 16 foot wide structure, this would place the upper structure's east wall about 3 feet east of the cellar wall.

V. CELLAR FILL

For analytic purposes, the cellar was divided into eight stratigraphic units. These strata are illustrated in Figures 16, 17 and 18; and Plates 11 and 12. Each of these is distinguished from the others primarily on the basis of soil type; though, in a more general sense, each of the defined strata represents different behavioral operations. Because of the stratigraphic nature of the fill, it was assumed that the levels were representative of differences in time as well as activities. The data recovered contain many pieces of conflicting evidence which tend to make interpretation difficult.

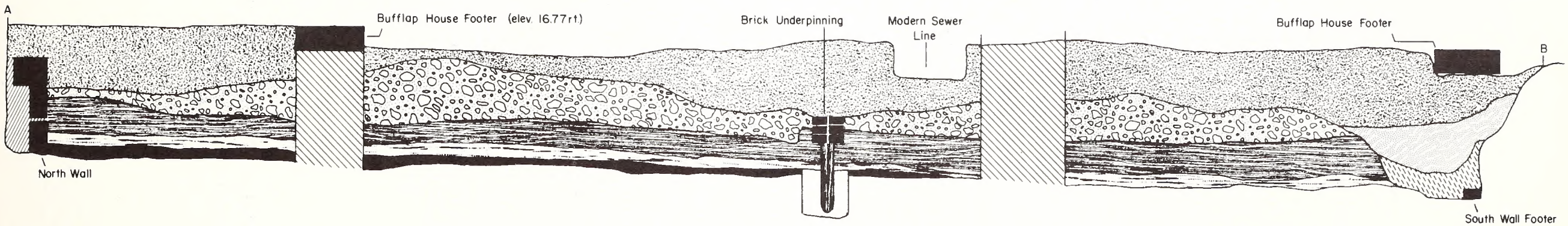
The proposed field methods were strictly followed, though under constant time pressure. The most important operation was the identification of the various soil levels, followed by a scrupulous maintenance of the integrity of the strata. This care resulted in numerous proveniences which, upon closer examination in the lab, were found to be equivalent. The general feeling of the writer is that it is preferable to "split" units in the field and later consolidate them on paper. Because of this later "lumping" of field units, each of the defined strata consist of numerous field units. In the following pages each stratum is discussed in greater detail.

It is also noted that, in situations where certain proveniences were believed (for a variety of reasons) to be unreliable, a separate excavation unit was used in order to remove these offending units from the in-depth analysis which was conducted. Thus, Stratum VIII receives little attention in the following pages. The units involved were widely scattered in the cellar, most resulting from the inadvertent mixing of levels.

As covered in an earlier section of this report, the architectural evidence demonstrated that the cellar had undergone a series of repairs to the western and northern walls. It seems that most of these repairs took place in the early years of the cellar's use, and therefore predate the fill in the cellar.

Stratum I--Floor

At the very bottom of the fill, a thin level of hard packed sandy clay was encountered. This level was much like the underlying subsoil, though it contained numerous inclusions of brick fragments, charcoal flecks, and artifacts which were ground firmly into the soil matrix (Fig. 16). Removal of this level confirmed the

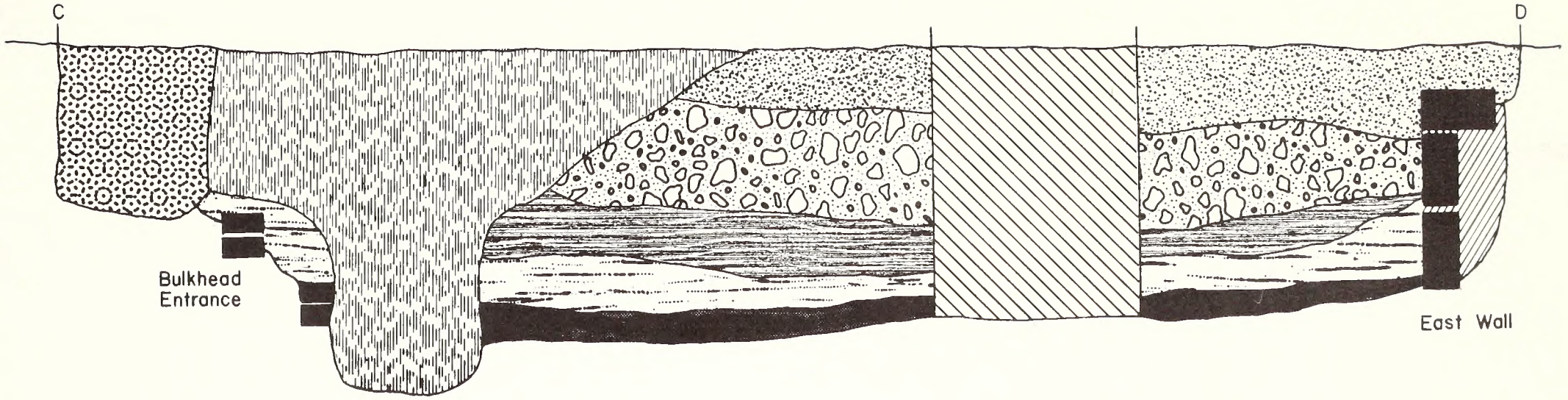


Legend

- Stratum VII: Upper Loam Fill
- Stratum VI: Cellar Wall Collapse
- Stratum V: Brick Rubble
- Stratum IV: Robber's Trench
- Stratum III: Dark Clay Loam
- Stratum II: Mixed Clay Wash
- Stratum I: Floor
- Stratum IX: Builder's Trench
- Post Mold (cuts through stratum iii)
- Post Hole (cuts through floor, sealed by stratum ii)
- Balk

0 .5 1.0 1.5 2.0 3.0 4.0 6.0 8.0 feet

FIGURE 16: Cross Section AB, Area B



Modern Sewer Line Trench

Late 19th Century
Disturbance

Stratum VII: Upper
Loam Fill

Stratum V: Brick Rubble

Balk

Stratum III: Dark
Clay Loam

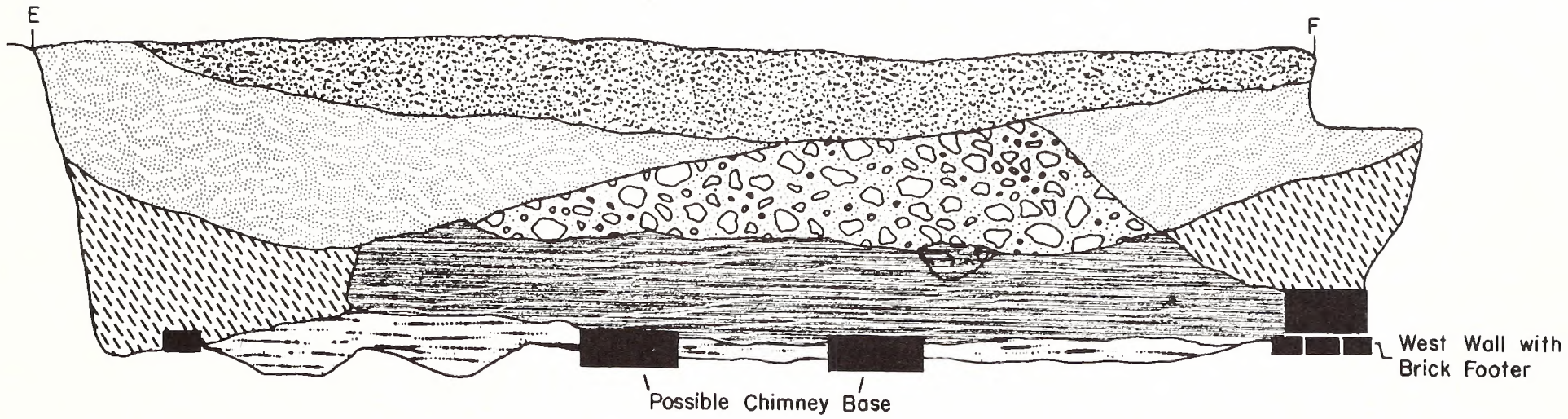
Stratum II: Mixed
Clay Wash

Stratum I: Floor

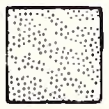
Stratum IX: Builder's
Trench

0 .5 1.0 2.0 4.0 6.0 feet

FIGURE 17: Cross Section CD, Area B




Stratum VII: Upper Loam Fill


Stratum VI: Cellar Wall Collapse


Stratum V: Brick Rubble


Stratum IV: Robber's Trench


Stratum III: Dark Clay Loam


Stratum II: Mixed Clay Wash



FIGURE 18
Cross Section EF, Area B

hypothesis that it was an earthen floor for the structure. It proved to be no greater in depth than two inches and peeled easily from the looser and cleaner subsoil which lay directly beneath it.

There was variation in the fill. The most noteworthy of these variations was that the floor was restricted to the area north of the cross wall. Although a similar level was encountered to the south, its contents and nature were markedly different, more closely resembling the overlying wash levels. The lack of the floor in the southern section may have been a result of differential usage of the cellar, with the back (that is, southern end) not being trod upon as regularly as the front (north) end.

Several features were encountered at or below the floor level. A circular stain of dark soil was found in the extreme northeast corner of the cellar. The stain formed a nearly complete ring, describing a circle 2 feet in diameter. It seems apparent that the stain represents the location of a barrel placed out of the way in the corner of the cellar. The fact that it left a noticeable stain in the soil indicates that the barrel had remained in place for a considerable period of time. No evidence for its contents was found.

In the extreme northwest corner of the cellar, removal of the floor revealed a small pile of wall material. This was all finely ground, leaving a powdery white deposit. It is probable that this pile is a remnant of some of the renovation work which was conducted in the cellar, and, as such, is not actually a component of the floor stratum (Plate 13). This pile of material contained only a few artifacts, predominantly shattered pipe stems, perhaps left by laborers working on the repairs to the walls.

Immediately in front of the bulkhead entrance and to its north, were two shallow depressions which were filled with the same hard packed, dirty, sandy clay fill characteristic of the floor. Neither of these depressions were regularly shaped, nor were they of any significant depth. It seems that rather than having any functional relationship to the use of the cellar, they may represent areas where the base of the cellar was merely dug too deeply. In fact, the smaller of the two could easily have been made by a single blow of a shovel which gouged a bit too far.

Directly opposite the bulkhead entrance against the eastern wall a well-preserved cypress board was unearthed. Measuring 3 feet by 10 inches, the board was found merely resting on top of the floor. It is difficult to arrive at a function for such an anomalous feature; though considering the high probability of water problems in the cellar, it could have been placed on the floor in order to provide a dry platform for storage.





Plate 13 (left): View to West Showing the Extreme Northwest Corner of Cellar Interior, Revealing a Small Pile of Wall Material.

Plate 14 (above, right): View to North Showing a Line of Dry Laid Brick in the Cellar in Stratum III.

The final feature located at the floor level remains unexplained. A small trench was found immediately within the bulkhead entrance. Trench fill was the same as that noted for the floor, but was considerably softer. Removal of the fill showed it to be only 2 inches in maximum depth. At the bottom, however, was a dark organic stain, most likely from a rotted board which was 1 inch wide and 18 inches long. The orientation of this soil stain indicates that a board was placed either on edge or on end standing up from the floor. Its location adjacent to the bulkhead would tend to render it an obstacle to easy passage in the cellar. Perhaps it, too, was related to the recurrent drainage problems, though there are certainly insufficient data to come to a logical explanation for it.

Chronology--Dating evidence for the floor level is meager. Few artifacts were recovered from the fill. This is much as would be expected from a dirt floor, as most of the artifacts would be those which were ground underfoot into the floor. This resulted mainly in extremely small chips of ceramics, glass, pipe stems, and bone. The dating evidence available includes several sherds of creamware, pointing to a post ca. 1770 date for the floor's usage. In addition, both the Binford (1962) and Heighton and Deagan (1972) pipe stem dating formulas were utilized (Table 2). The Heighton and Deagan formula provided a date of 1748.11, which is much too early for the structure in question. The Binford formula, however, resulted in a date of 1773.12, which fits well with the available data, including the sherds of creamware noted above. It seems most probable, therefore, that the floor level was not sealed until after, at the very earliest, 1770. Other evidence, to be covered later in this report, would tend to place the date as much as 25 years later. Such a late date is indicated by the Mean Ceramic Date for this floor. Though based on a small sample of only 24 sherds, a date of 1784.92 was obtained. With a standard deviation of 43 years, however, the accuracy of this calculation is highly suspect.

This late date for a floor in a structure believed to be associated with a ca. 1760 construction date demands attention. It is specifically worth reiterating the possible impact of the repairs to the walls. If the argument for water and drainage problems is maintained, then it is reasonable to postulate that when the repairs were made the floor would have been cleaned off. If significant amounts of silt had accumulated, it is probable that this would have been removed. Certainly, removal of the overlying fill could easily involve the removal of portions of the floor deposits also, and could account for the depressions noted in the floor.

TABLE 2

Comparison of Terminus Post Quem and
Formula Dates by Stratum

Strata	T.P.Q.	M.C.D.	Heighton & Deagan	Binford
VII	1820	1800.58±12.9	1768.92	1790.33
VI	1820(?)	1799.72±29.5	1763.60	1785.91
V	1802	1799.56±7.5	1773.13	1793.60
IV	1803	1800.29±7.2	--	--
III	1803	1796.15±14.9	1766.85	1788.59
II	1795	1789±19	1782.87	1800.66
I	1770	1784.92+43	--	1773.12

T.P.Q. = Terminus Post Quem

M.C.D. = Mean Ceramic Date

Stratum II--Mixed Clay Wash

Immediately above the floor level, there was evidence for the above mentioned water and drainage problems in the form of a water laid stratum of mixed light colored sandy clay. The level varied in thickness from its thickest adjacent to the bulkhead and along the eastern wall, lensing from ca. 8 inches in depth to only a few inches in the extreme northern corners of the structure. The exact mechanism for the deposition of this level is not clearly understood, though its presence by the bulkhead and a section of the collapsed eastern wall makes it clear that it had its original source outside the cellar. No distinctive differences were noted between the bulkhead fill and that which came through the eastern wall. The wash level was widely distributed in the cellar, covering both the southern and northern sections.

It is also important to note that the wash level sealed the remains of the central crosswall, thus indicating that the wall was no longer extant at the time of deposition. In addition, the wash caps the series of four post holes (Fig. 15) which apparently were associated with structural supports for the cellar's superstructure. Importantly, the molds for these posts pass through the wash, demonstrating that they were still in place during the deposition period (Fig. 16). One can postulate, because the posts were still in place, that the cellar was still beneath a standing structure, which was probably occupied. The occurrence of the washed fill argues strongly for the postulated water problems in the cellar. Particularly in front of the bulkhead, successive lenses of washed sand and clay were apparent in the soil profile, demonstrating how the wash had entered through the entrance and then fanned out to cover the floor.

Artifacts within the wash level were not distributed randomly and provided indirect evidence that the cellar may still have been in use. Of particular note was a concentration of pipe stems, pipe bowl fragments, wine bottles, and window glass located in the southwest quadrant of the structure. By way of comparison, there were a total of 137 pipe stems in the entire wash level; of these, 121 were located in the one unit in the southwest corner (ER 77-24-37K). Such a disproportional distribution must certainly be related to differential usage of the cellar. The high percentage of pipe stems (88.3 percent) in this one locality could be the result of several processes. One could be that a box of pipes was stored there and the broken stems were discarded in place. Another possiblity could be that the stems' presence represent a popular place to gather for a smoke, perhaps to escape the heat of the summer. Of course both of these "interpretations" are fully conjectural and have no basis in the actual available data; however, another more direct means of substantiating the above argument for a special activity area is available. It is noted that 59 percent of the wine bottle glass recovered from the wash level was within

the same unit as the high proportion of pipe stems. This disproportional distribution did not occur with respect to any other artifact class, thus obviating the question of there simply being more artifacts in that unit due to higher incidence of trash disposal. Since pipe smoking and wine drinking may be legitimately related to social activities, the idea that the cellar was being used as a refuge becomes more enticing. Great caution must be exercised, however, to avoid reconstructing specific activities on the basis of such evidence. It is, perhaps, best to leave the issue with the simple interpretation that differential distribution of pipe stems and wine bottle glass in the wash level are indicative of a special social activity area located in the southwest corner of the cellar.

Chronology--It has been mentioned in the foregoing section on Stratum I that the floor had been sealed after 1770. Artifacts from the wash provide evidence that this did not occur prior to ca. 1795. This date is based upon the occurrence of underglaze polychrome hand painted pearlware in the fill. In addition, other pearlwares dating after ca. 1790 were also widely distributed in the level. It is cautioned, however, that the 1795 date for the polychrome decoration is only approximate and could easily be extended backwards. The preponderance of the dating evidence, however, does argue for a late filling.

When the processes involved in the accumulation of the wash are considered, however, this late date may be more indicative of the later years of its filling than of the actual beginning date for the deposit. South's Mean Ceramic Date formula provides archaeologists with a tool to evaluate just this sort of problem. The formula was applied to the ceramic assemblage from the wash and yielded a date of 1789.10, with a standard deviation of 19 years. Pipe stem dating formulae were also applied to the wash layer, and yielded dates varying from Heighton and Deagan's 1782.87 to Binford's 1800.66. These mathematically derived dates provide clues to the time involved in the accumulation of the wash.

It is possible that the material began to wash through the bulkhead shortly after the final renovations to the cellar walls, and continued to accumulate for a number of years. Unfortunately, the historical record provides no clues to the occupancy of the property during this period. At any rate, the wash level was not sealed until after ca. 1795, a date which is substantiated by subsequent fills.

Stratum III--Dark Clay Loam

Above the wash was found a uniform stratum of dark brown clay loam. The darkness of the level, in combination with its relatively high artifact content (25 percent of the total cellar assemblage), can be taken as evidence that the level was the result of intentional

filling with organic refuse and household garbage. The stratum was generally 1 foot deep, though there was some minor variation in this distribution with the southern area being upwards of 18 inches thick.

This level was possibly added intentionally in order to raise the floor above the line of the persistent water problems. It is with this level that the first indication of contradicting data was encountered. As noted with Stratum II, the series of four post molds crossing the cellar also cut through the dark loam. This indicates, as with the wash, that at the time of deposition the building associated with the cellar was still standing. The question, therefore, becomes one of whether or not the cellar was still being used. The collapse of the eastern wall had occurred prior to the addition of this fill. The lack of a well-defined "floor" at the surface of the dark loam may be evidence that the cellar had, in fact, been abandoned.

A problematic feature located directly between the two central posts was found. This consisted of a line of dry laid brick, one course wide and three deep (Plate 14). The exact coincidence of the brick with the two posts certainly indicates a functional relationship between the two. If, as was hypothesized in an earlier section, these posts served as structural supports for the structure above, it is a reasonable argument that the brick feature was an underpinning added to replace or complement the posts. Such an evolution for cellars has been noted on numerous sites in Williamsburg, Virginia, where water and drainage problems had led to the addition of a level of fill, followed by structural underpinning of the building (Noël Hume, Personal Communication, 1977). Such an interpretation appears, at first glance, to fit well with the conjectured history of the structure. As the analysis of materials was conducted, however, certain data became available which severely undermine this position.

Chronology--Artifacts recovered from the dark loam provided ample evidence for the dating of the fill. Ceramics were generally characteristic of a late eighteenth-early nineteenth century period. Underglaze polychrome pearlware sets the beginning date after ca. 1795, though other evidence was available for a later date. Several fragments of a plain pearlware dinner plate were found in the loam which bore the impressed makers mark "D.D. & CO. CASTLEFORD POTTERY". Research on this mark revealed that it was produced by David Dunderdale, who had established a pottery manufacture in the mid 1790s and operated until 1821. His original mark bore the impression "D.D. CASTLEFORD", and it was not until 1803 when he had been joined by a partner, John Plower, that the "& CO" was added to the mark (Hughs 1968:35). On the basis of this mark, therefore, we are able to assign a post 1803 date to the fill.

As with the other units, mathematical formulae were also applied to the clay loam artifacts. South's Mean Ceramic Date arrived at a median date for the fill of 1796.15±14.9 which, as demonstrated, may be a bit too early (Table 2). Considering, however, that the later artifacts were mixed with those carrying early mean dates helps to explain the formula data. Neither pipe stem formula provided adequate dates, with Heighton and Deagan's falling far short at 1766.85 and Binford's at 1788.59.

Stratum IV--Robber's Trench

Shortly after the deposition of the clay loam, the building was apparently abandoned. Demand for building materials elsewhere resulted in the partial robbing of the cellar walls. The robber's trench fill consisted of a mixture of broken brick, mortar, wall block, and clay. As shown in Figure 15, only the southern section of the cellar was robbed, following a line from just east of the posthole line around the southern end of the cellar. The trench was readily recognized as such by the distinct difference between its fill and the dark loam through which it cut. Along the southeastern wall the material was robbed completely to subsoil, leaving only faint traces of the brick footing patterns in the subsoil and one line of stretcher-laid brick against the earthen cellar wall.

Possibly related to the robbing was a pile of wall blocks, which were located in the extreme northwest corner of the cellar. These blocks were broken and apparently discarded on top of the dark loam.

Chronology--Few artifacts were recovered from the robber's trench fill. Again, polychrome decorated pearlware was the latest datable artifact, being produced after ca. 1795. South's Ceramic Date for the level indicates a mean date of 1800.29±7.2. No pipe stems were found in the fill. Because the trench cuts through the dark loam, the date for the robbing of the building must be after 1803 (Table 2).

Stratum V--Brick Rubble

In all likelihood the robbing of the cellar walls took place at about the same time as the final destruction of the building. The destruction was amply demonstrated in the cellar fill by a massive level of brick, mortar, and plaster rubble. The rubble consisted of two distinct piles, one in the north and one in the south, separated by the earlier mentioned brick underpin. All whole brick had been removed, resulting in a rubble layer of only bats and fragments. In many places, the rubble also consisted of two distinct levels. A 4 inch thick pocket of wall plaster overlaid the dark loam in the northern section, followed by the brick itself. Bricks in the two piles were similar in paste, but since

only fragments were present, no comparison in size was possible. The northern section of the rubble varied considerably in depth, from 2 to 3 inches along the north wall to a maximum of 18 inches.

All available evidence points to a deliberate dismantling of the structure rather than a slow degeneration. The brick plaster concentration suggests the purposeful removal of the plaster to salvage lathing from the interior of the walls before the final destruction. The northern pile of rubble is considerably larger than that to the south, however, both probably result from the dismantling of chimneys. Perhaps fewer reclaimable bricks were in the northern chimney, resulting in the larger rubble pile.

The fact that the brick underpin was left exposed by the rubble could indicate that when the chimney was taken down the wall which was supported by the brick was still standing. Such an interpretation would aid in explaining the distinct break between the two piles of rubble. It is possible, therefore, to postulate the operations involved in the destruction of the building. First, all usable wood would have been removed, including siding, framing, lathing and flooring from the upper building. This was followed by the dismantling of the chimney or chimneys with all unusable brick being thrown into the open cellar hole.

Chronology--Dating evidence for the rubble fill is the same as for the underlying clay loam and robber's trench, i.e., the presence of underglaze polychrome pearlware dates the level after ca. 1795. Due to the fact that the dark loam contained a datable artifact from after 1803, the rubble, which lies stratigraphically above the loam, must also date after that time.

South's ceramic formula resulted in a date of 1799.56±7.5. Pipe stem calculations were again too early with Heighton and Deagan's falling considerably short at 1773.13 and Binford's, closer, but still too early at 1793.60 (Table 2).

Stratum VI--Cellar Wall Collapse

After the southern wall had been robbed and the building dismantled, the entire southern end of the cellar hole was left with a depression running along the line of the robber's trench. Stratigraphic data show that after the rubble was deposited, the then exposed earthen sides of the cellar collapsed inward to fill this open space. For the most part this stratum consists of virtually clean clay mixed with pockets of loam and artifact bearing soils. Stratum VI, therefore, overlies both the rubble and the robber's trench and is confined to the southern end of the fill.

Chronology--It is probable that this deposition took place shortly after the destruction of the building. Artifacts in the fill include one sherd of whiteware which was not produced until ca. 1820.

Generally, however, the trend of the artifacts argues for a somewhat earlier date for the level, and the single sherd of the late ceramic may be regarded as intrusive (Table 1).

Formula dating again proved to be unproductive. South's ceramic date is 1799.72±29.5, Binford's pipe stem date is 1785.91 and Heighton and Deagan's date falls at 1763.60.

Stratum VII--Upper Loam Fill

The upper stratum of sandy brown loam was deposited above the rubble and covered the entire cellar hole. In terms of volume of earth, the upper loam was the largest stratigraphic unit in the cellar. Up to 18 inches thick against the northern wall, it thins out above the rubble pile and becomes almost 2 feet thick in the southern end of the cellar. Grading operations in preparation for the construction of the J. Edwin Bufflap house had apparently removed some of the upper fill in the cellar, though it is not known to what extent this disturbance affected the cellar.

The upper fill in the southern end of the cellar consisted of several pockets of dissimilar fill, and is probably representative of intentional filling with soil from various localities. The bulk of the fill, however, was a chocolate brown sandy loam. It seems likely that, had the building been purposely dismantled, the resulting hole may have also been filled.

Chronology--It has been postulated that the final filling of the cellar probably took place shortly after the destruction of the building. It was noted that the dismantling of the structure took place sometime after 1802, from historical records, and possibly as late as 1820. Artifacts from the upper loam in the cellar also indicate a ca. 1820 fill date. Sherds of both ironstone and whiteware occur in the fill, though most of this is restricted to the upper fill at the rear of the building. On the basis of artifacts, a date can be assigned to the final filling of the cellar at post ca. 1820; due to the overall assemblage, the actual date is probably very close to that end date. This date fits nicely with available historical records, which after 1820 make no mention of structures on the tanyard lots.

Formula dates were again consistently early. South's ceramic date fell at 1800.58±12.9 while the pipe stem dates were completely out of the question, with Heighton and Deagan's 1768.92 and Binford's 1790.33 (Table 2).

VI. ARTIFACT ANALYSIS

Ceramics

The most distinctive characteristic of the ceramic assemblage was the wide variety of types which were recovered from the fill. Virtually all types of ceramics produced in England during the last quarter of the eighteenth century are represented to some degree in the fill. In addition to those types mentioned in Noël Hume's standard reference (1970:102-38), several uncommon types were also present.

The ceramic assemblage was the subject of detailed vessel analysis which will be covered at a later stage of the present section. For this brief descriptive section, however, the purpose is to report the results of the ceramic analysis at the sherd count level. Table 3 presents the varying frequencies of ceramics by level and the totals for the entire cellar. It is noted that this table includes only those types which fit into the listed categories, and excludes a very small number of "exotic" types such as commemorative black transfer printed pearlware and brown transfer printed pearlware.

In order to determine whether there was any pattern developing in the stratigraphic composition of the ceramic assemblage, the categories were lumped into broad groups of "creamware," "pearlware," "coarse earthenware," "porcelain," and "other" (Plates 15-29). The "other" category was used to include the large number of types which were represented by relatively few sherds and can be taken as a general index of variability in the ceramic assemblage. These broad categories were then plotted by strata on bar graphs showing relative frequencies of ceramic types (Fig. 19). The interpretation of this presentation indicates that there is significant variation in the depositional history of the site. At the lower levels (I and II) creamware and coarseware constitute the bulk of the ceramics. In the remaining levels (III-VII) pearlware and creamware share the largest percentage while coarseware and other types fall off dramatically. Porcelain remains fairly constant at approximately 5 percent throughout the fill. Variability is greatest in the lower levels, dropping off considerably in the upper fills.

This tends to support the findings of the archaeological analysis which indicated that the fill becomes progressively younger. The increase in pearlware fits well with the known influx of that ware after ca. 1780. The high percentage of creamware and pearlware in the assemblage also corresponds with the typical pattern noted on other sites dating to the late eighteenth century (Noël Hume 1977).

TABLE 3

Ceramic Distribution By Stratum
(Percentages)

	I	II	III	IV	V	VI	VII	TOTAL
Ironstone					0.3	0.2	0.4	0.2
Whiteware			0.3		0.5	0.2	0.7	0.5
Pearlware, undecorated	8.8	3.3	11.6	7.8	23.1	13.8	20.1	16.4
Pearlware, edged		1.4	2.9	1.0	7.8	4.8	6.0	4.9
Pearlware, blue transfer printed		1.0	3.3	2.9	1.5	5.8	5.0	3.8
Pearlware, blue handpainted		3.7	2.8	4.8	6.1	5.5	5.6	4.8
Pearlware, polychrome handpainted	2.9*	4.9	6.4	3.9	4.8	4.2	5.4	5.4
Pearlware, overglaze			0.2		0.1		0.2	0.2
Pearlware, annular		0.9	0.8		0.8	1.2	2.4	1.6
Fingerpainted ware		0.5	0.3		0.5	0.7	0.1	0.3
Creamware, light	17.6	7.3	27.2	32.0	29.5	39.2	34.2	30.0
Creamware	29.4	24.7	12.3		1.8	0.4	0.6	5.5
Creamware, transfer printed		0.9	0.1		0.1	0.4	0.3	0.2
Creamware, overglaze		0.3	1.5		0.4	0.4	0.2	0.5
Delft, tin glazed		1.6	1.6		1.2	0.9	1.4	1.4
Buckley earthenware		3.1	2.4		0.5		0.3	1.0
Agateware, coarse		1.9	3.1		0.4	0.5	0.5	1.2
Clouded ware		0.3	0.1		0.4	0.2	0.2	0.2
Jackfield ware		0.2	0.4		0.3	0.4	0.2	0.3
Slipware, lead glazed	8.8	2.6	1.1		1.1	0.5	1.2	1.3
Stoneware, white saltglazed	5.9	1.6	0.7	1.0	0.2	2.8	1.3	1.4
Stoneware, Rhenish			0.2		3.3		0.2	0.6
Stoneware, Nottingham		3.5	0.1					0.4
Stoneware, other		1.0	1.9	1.0	1.3	0.7	1.9	1.7
Coarseware	20.6	24.3	5.8	39.8	6.1	11.1	6.1	8.5
Colono Indian ware		5.9	7.3		0.4		0.2	2.3
Porcelain	5.9	5.4	4.2	5.8	5.3	6.3	5.1	5.1
Possible North Carolina slip		1.0	0.2		0.1		0.1	0.2
Porcelain, English		1.6	1.2		0.4		0.2	0.5

*in posthole

ARTIFACT PLATES 15 THROUGH 30

Plate 15: Selection of Flat Creamware Forms.

Top Row, Left to Right

1. Feather Edged Creamware Plate
2. Undecorated Plate
3. Beaded Rim Plate

Second Row, Left to Right

1. Queen's Pattern Plate
2. Feather Edged Plate with Raised Edge

Lower Row, Left to Right

1. Royal Pattern Plate
2. Molded Diamond Border Plate
3. Molded Diamond Border Plate

Plate 16: Selection of Creamware Hollow Vessel Forms.

Top Row, Left to Right

1. Bowl
2. Rolled Rim Bowl

Second Row, Left to Right

1. Chamber Pot with Flat Extruded Rim
2. Reeled Rim Gravy Boat
3. Beaded Rim Saucer
4. Undecorated Lid

Third Row, Left to Right

1. Possible Chamber Pot with Extruded Rim
2. Rolled Rim Cup

Lower Row, Left to Right

1. Extruded Flat Rim Chamber Pot
2. Reeled Rim Bowl
3. Beaded Rim Saucer

Plate 17: Decorated Creamware Vessels.

Left to Right

1. Overglaze Decorated Creamware Cup, Sits in Undecorated Saucer
2. Creamware Teapot with Beaded Footing and Molded Decoration about Shoulder of Pot
3. Top to Beaded Motif Teapot, Possibly Lid for (above) Teapot to right
4. Cup with Gadroon-like Molded Body, Flat Rim and Two Piece Handle

Plate 18: Selection of Decorated Creamware Vessels.

Top and Second Row, Left

Black Transfer Printed Creamware Saucer Depicting Black Servant Pouring Tea

Top Row, Right

Underglaze Blue, Hand Painted Creamware Saucer

Second Row, Middle to Right

1. Overglaze Red, Hand Painted Creamware Saucer
2. Annular Decorated Creamware in Brown, Orange, and Tan, Probably a Pitcher

Lower Row, Left to Right

1. Clouded Creamware Teapot Top
2. Cauliflower Ware Sherd
3. Brown and Green Clouded Ware Saucer

Plate 19: Selection of Flat Form Vessels.

Top Row, Left

Undecorated Creamware Plate with Flat Rim

Second Row, Left

Royal Pattern Creamware Plate

Lower Row, Left

Green Edged Pearlware Plate

Right

Blue Edged Pearlware Plate

Plate 20: Selection of Edge Decorated Pearlware Vessels.

Left

Blue Edged Plate

Top Row, Left to Right

1. Blue Edged Plate with Molded Floral Designs
2. Blue Edged Plate, Undetermined or Perhaps Octagonal Shaped

Second Row, Left to Right

1. Green Edged Plate
2. Green Edged Hollow Form Vessel, Form Undetermined
3. Green Edged Plate

Lower Row, Left to Right

1. Blue Shell Edged Plate
2. Blue Edged Plate

Plate 21: Selection of Underglaze Decorated Polychrome Pearlware Vessels (Hand Painted).

Top Row, Left to Right

1. Hand Painted Floral Motif Pearlware Bowl, Yellow and Brown
2. Polychrome Pearlware Bowl, Green, Blue and Yellow
3. Polychrome Pearlware Pitcher, Blue, Green, Brown, and Yellow

Second Row, Left to Right

1. Polychrome Pearlware Saucer, Orange, and Blue (see matching cup immediately below)
2. Polychrome Pearlware Saucer, Blue, Yellow, and Green (see matching cup immediately below)
3. Polychrome Saucer, Blue, Green, and Brown (see matching cup immediately below)

Lower Row, Left to Right

1. Polychrome Cup, Orange and Blue
2. Polychrome Cup
3. Polychrome Saucer, Blue, Yellow, and Green
4. Polychrome Teapot, Brown, Green, and Yellow

Plate 22: Selection of Blue Hand Painted Pearlware and Annular Pearlware Vessels Including One Bottom Mark.

Top Row, Left to Right

1. Hand Painted Blue and White Chamber Pot, Geometric Motif
2. Hand Painted Blue Bowl, Floral Motif
3. Undecorated Pearlware Plate Fragment, Marked with Impressed "D.D. & CO. CASTLEFORD POTTERY", dates after 1803.

Second Row, Left to Right

1. Hand Painted Blue and White Saucer, Floral Motif (see matching cup below)
2. Hand Painted Blue and White Saucer, Geometric Motif (see matching cup below)
3. Hand Painted Blue and White Saucer
4. Annular Decorated Pearlware Saucer, Black and White Checked Motif Above, Blue Interior

Lower Row, Left to Right

1. Hand Painted Blue and White Pearlware Cup, Floral Motif
2. Hand Painted Blue and White Pearlware Cup, Geometric Motif
3. Hand Painted Blue and White Pearlware Bowl, Geometric Motif
4. Annular Decorated Cup/Mug, Green, Brown, and Black
5. Annular Decorated Cup, Blue, Orange, and Green

Plate 23: Selection of Blue Transfer Printed Pearlware Vessels.

Top Row, Left to Right

1. Blue Willow Pattern Plate, Blue Transfer Print
2. Oriental Motif on Pearlware Plate, Blue Transfer Print
3. Large Platter with Interlocking Circles on Rim, Blue Transfer Print

Second Row, Left to Right

1. Brown Printed Pearlware Cup (see matching saucer immediately below)
2. Black Transfer Printed Bowl
3. Pagoda Motif on Exterior of Cup, Blue Transfer Print (see matching saucer immediately below)
4. Pearlware Cup with Floral Design on Interior and Scenic Design on Exterior, Blue Transfer Print

Lower Row, Left to Right

1. Brown Printed Pearlware Saucer
2. Pearlware Saucer with Interior Floral Design
3. Blue Transfer Printed Pearlware Cup, Floral Design

Plate 24: Selection of Decorated Pearlware Vessels.

Left to Right

1. Overglazed Enamelled Cup in Red
2. Molded and Gadrooned Hand Painted Polychrome Cup, Hand Painted Floral Motif in Blue and Green
3. Hand Painted Polychrome Bowl, Blue, Orange, and Green
4. Black Transfer Printed Commemorative Mug, Commemoration of George Washington

Plate 25: Selection of Coarse Earthenware Vessels.

Top Row, Left to Right

1. Coarseware Jar with Iron Oxide Glaze on Interior, contained yellow material which may have been paint
2. Portion of Large Colono Indian Ware Pot
3. Storage Jug with Brown Speckled Interior and Black Slipped Exterior

Second Row, Left to Right

1. Slip Decorated Coarseware Sherd, Vessel Form Undetermined, Possibly of North Carolina Manufacture
2. Buckley Ware Storage Vessel
3. Coarseware Utility Bowl with Clear Lead and Iron Oxide Glaze

Lower Row, Left to Right

1. Coarseware Bowl with Clear Lead Glaze
2. Coarse Agateware Dish or Bowl
3. Reddish Grey Stoneware Body Chamber Pot with Black Lead Glaze and Raised Dots Below Extruded Rim

Plate 26: Large Coarseware Vessels.

Left to Right

1. Clear Lead Glaze Milk Pan
2. Large Storage Pot, Unglazed Exterior with Iron Oxide Interior

Plate 27: Selection of Porcelain Vessels.

Top Row, Left to Right

1. Underglazed Blue Decorated Chinese Export Porcelain with Gadrooning
2. Chinese Export Porcelain Bowl with Underglaze and Overglaze Decoration
3. Underglaze Blue English Porcelain Saucer

Second Row, Left to Right

1. Chinese Trade Porcelain, Overglaze with Gilding on Saucer
2. Underglaze Blue English Porcelain Cup or Tea Bowl

Lower Row, Left to Right

1. Overglaze Blue Decorated Chinese Trade Porcelain
2. Chinese Export Porcelain Bowl with Underglaze Blue and Overglaze Red and Gilding on Exterior
3. Overglaze Red Enamelled Tea Pot

Plate 28: Selection of Stoneware Vessels.

Top Row, Left to Right

1. English Brown Salt Glazed Stoneware Jug
2. Rhenish Stoneware Tavern Mug with "GR" Medallion
3. English Brown Salt Glazed Butter Pot

Lower Row, Left to Right

1. Neck to Brown Salt Glazed Stoneware Jug
2. Chamber Pot Fragment of Buff Colored Stoneware, Cobalt Blue Decoration
3. Rhenish Stoneware Mug Sherd, Cobalt Blue Decoration
4. English Brown Stoneware Chamber Pot
5. Neck to Brown Stoneware Storage Jug, Lustrous Iron Oxide Exterior

Plate 29: Selection of Miscellaneous Ceramic Ware Vessels.

Top Row, Left to Right

1. Molded White Salt Glazed Stoneware Plate
2. Molded White Salt Glazed Stoneware Plate Rim, Portion of Dot, Diaper, and Basket Motif
3. White Salt Glazed Stoneware Cup with Rolled Rim
4. Engine Turned Red Earthenware Top
5. Engine Turned Red Earthenware Teapot Fragment

Second Row, Left to Right

1. Hand Painted Blue Tin Glazed Earthenware Plate
2. Purple Dashed Border Tin Glazed Earthenware Dish
3. Slip Decorated Coarse Agateware Vessel, Form Undetermined
4. Lead Glazed Slipware Bowl, Vessel Number 586, Diameter 6 Inches

Third Row, Left to Right

1. Tin Glazed Earthenware Bowl with Brown Glazed Exterior and White Interior
2. Undecorated Tin Glazed Earthenware Chamber Pot (?) Handle
3. Diamond Motif on Jackfield Ware, Vessel Form Undetermined

Lower Row, Left to Right

1. Purple Sponged Tin Glazed Earthenware Bowl
2. Hand Painted Blue Tin Glazed Earthenware Plate

Plate 30: Selection of Wine Bottle Glass, Bases and Rims.

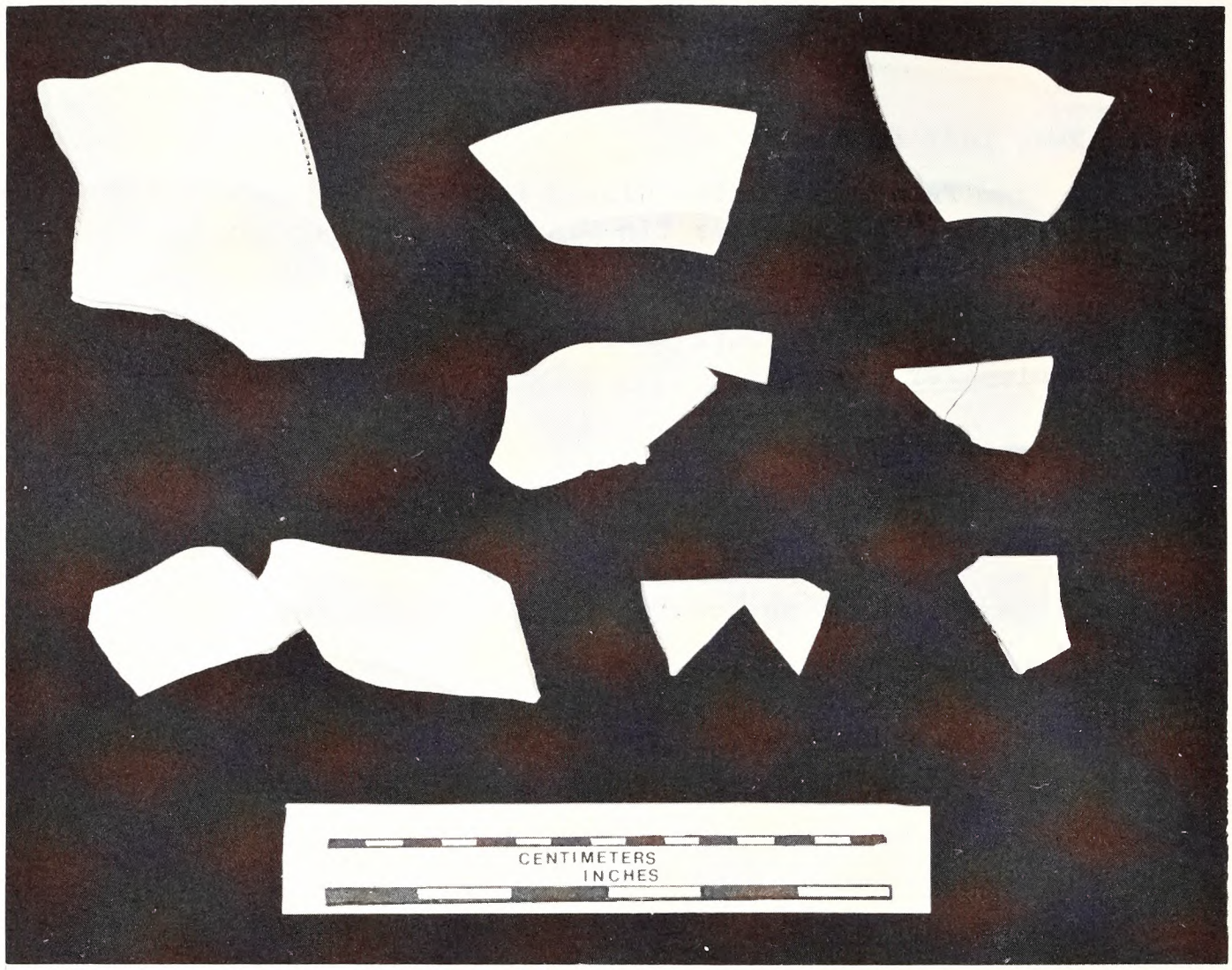


PLATE 15

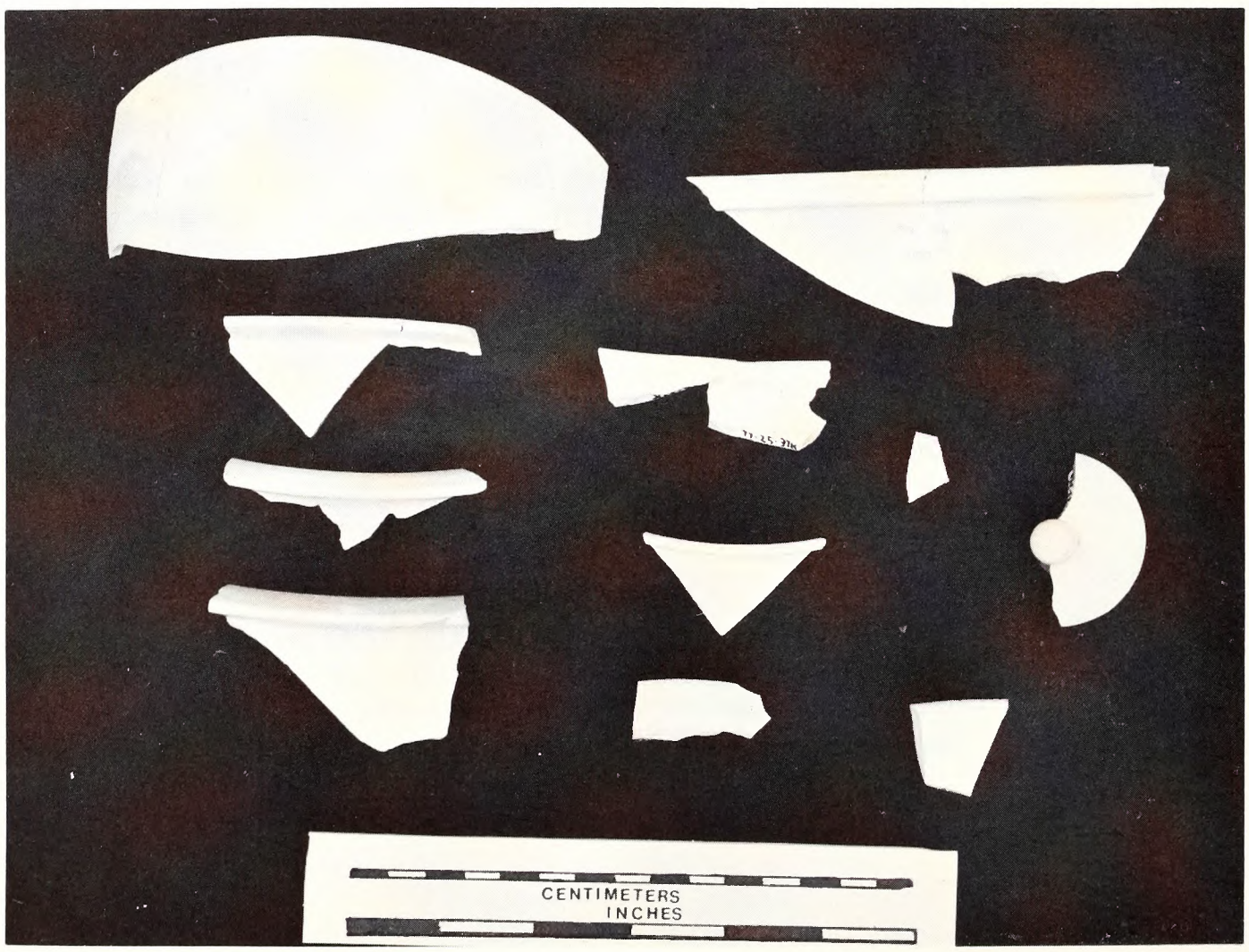


PLATE 16

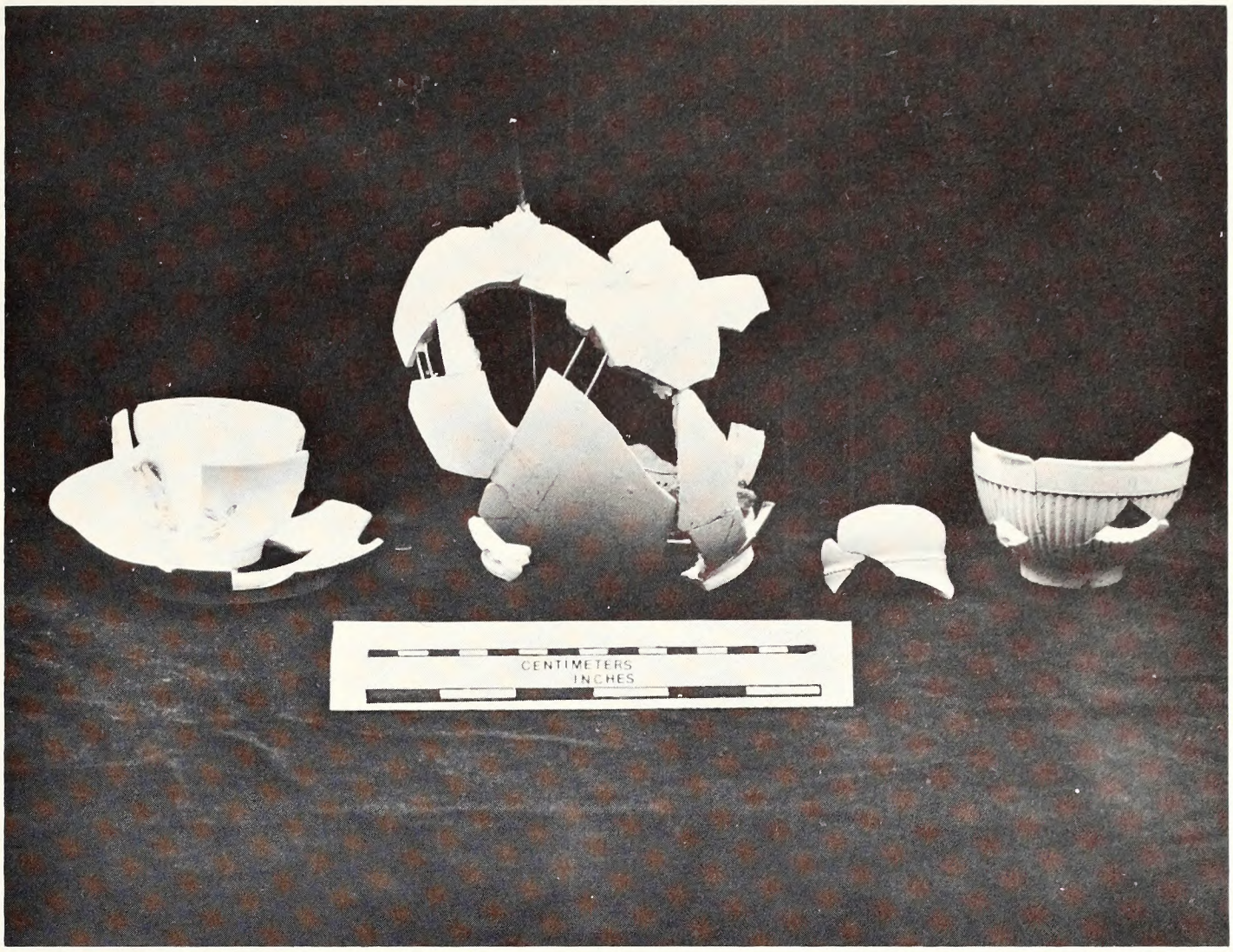


PLATE 17



PLATE 18

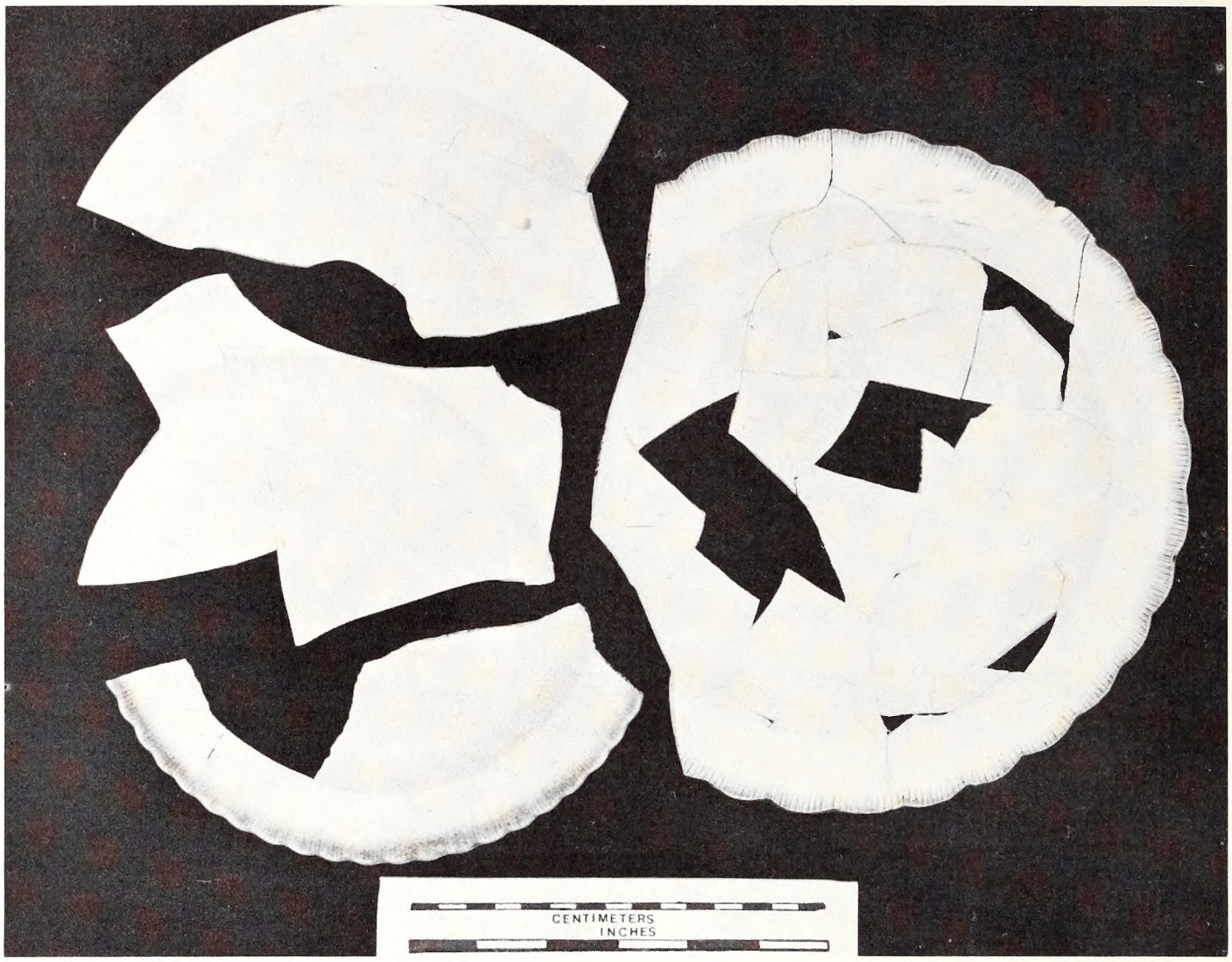


PLATE 19

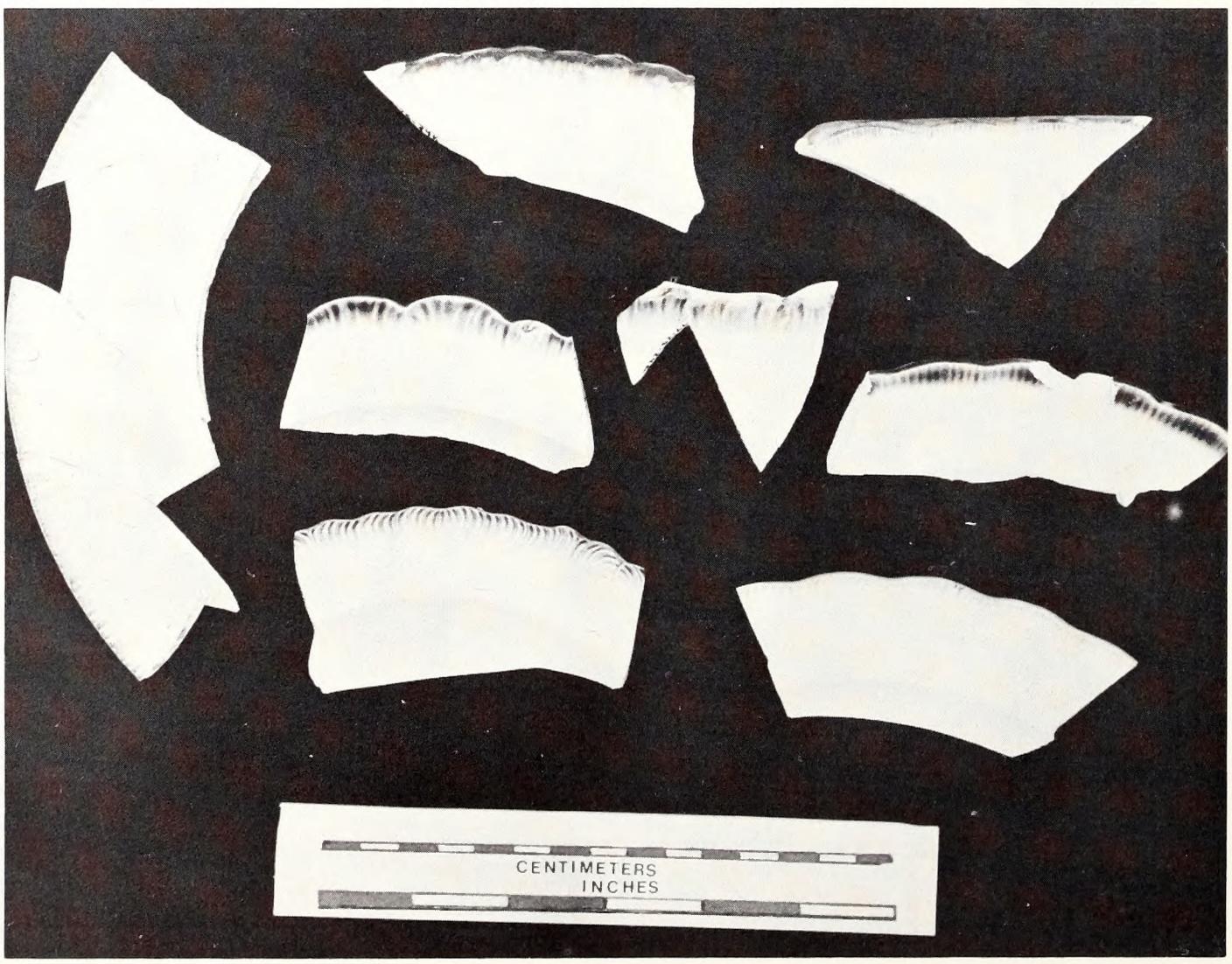


PLATE 20

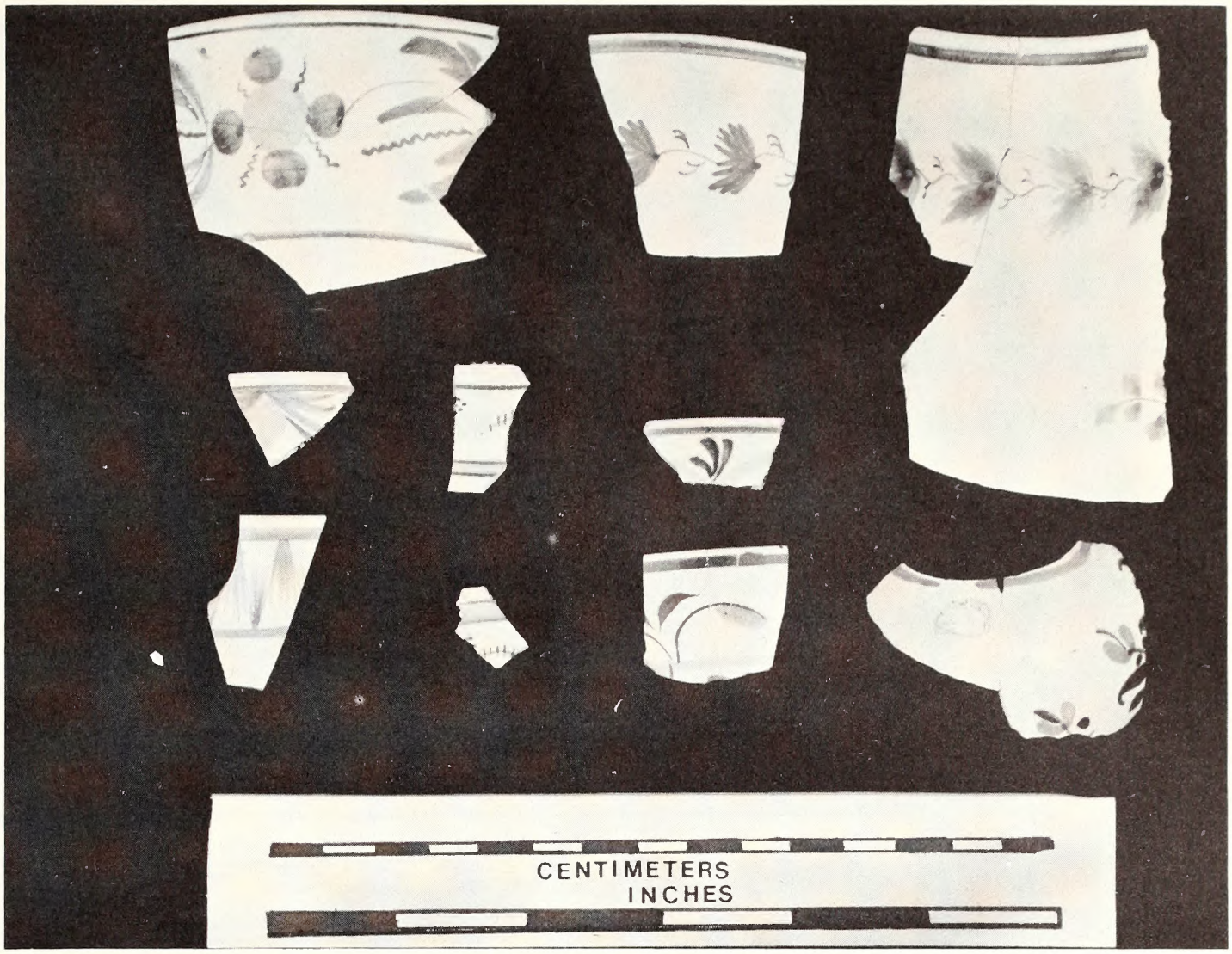


PLATE 21

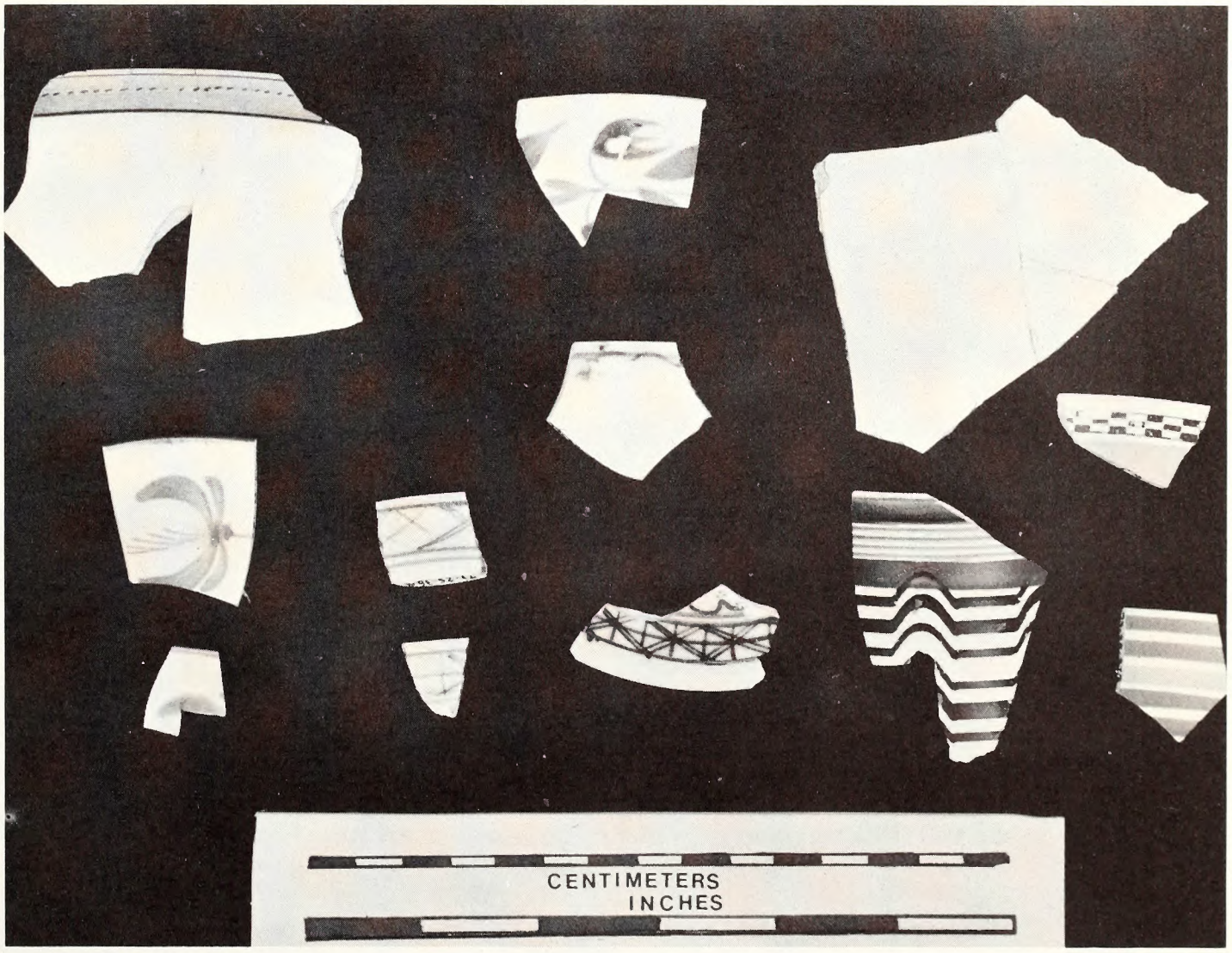


PLATE 22

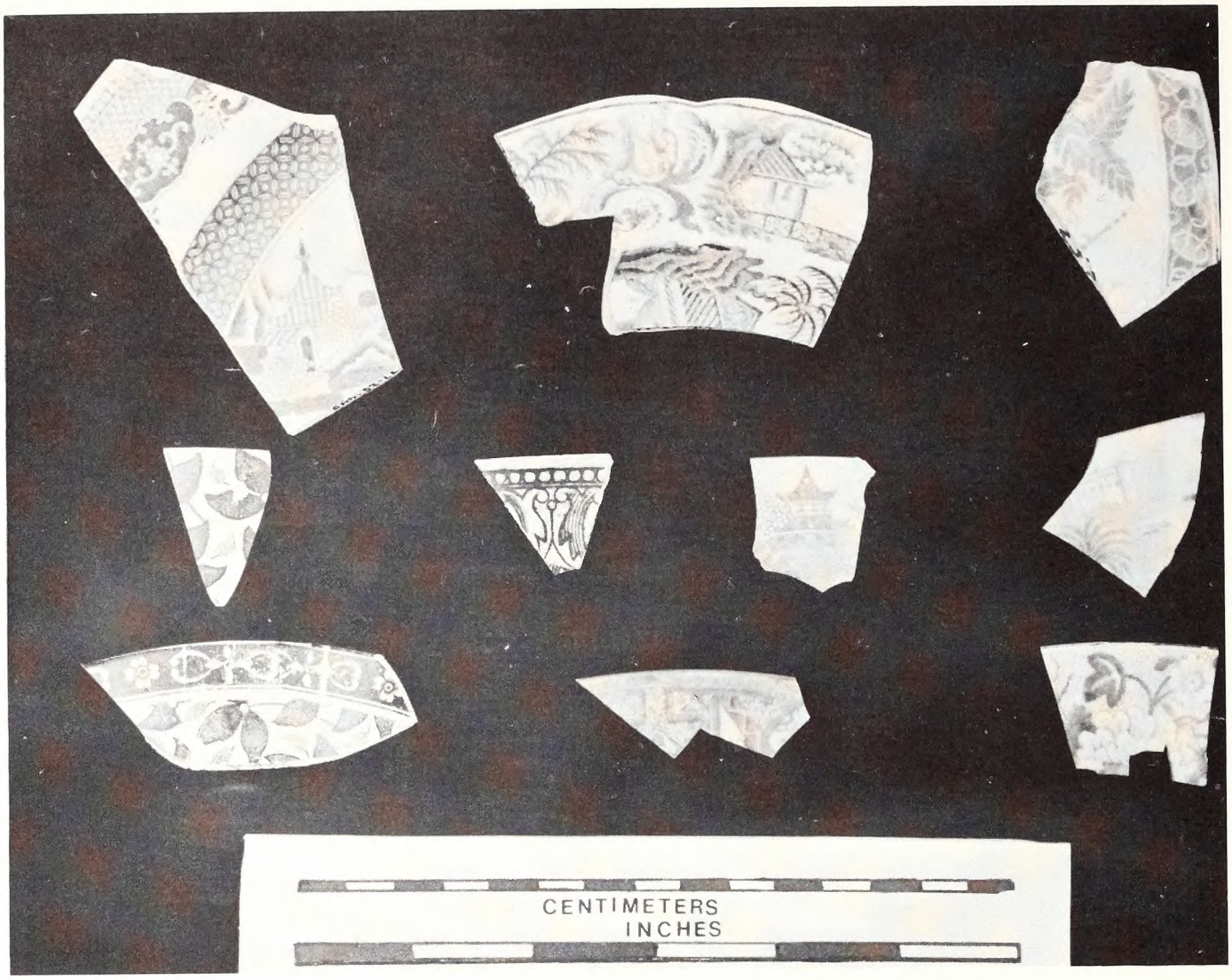


PLATE 23



PLATE 24

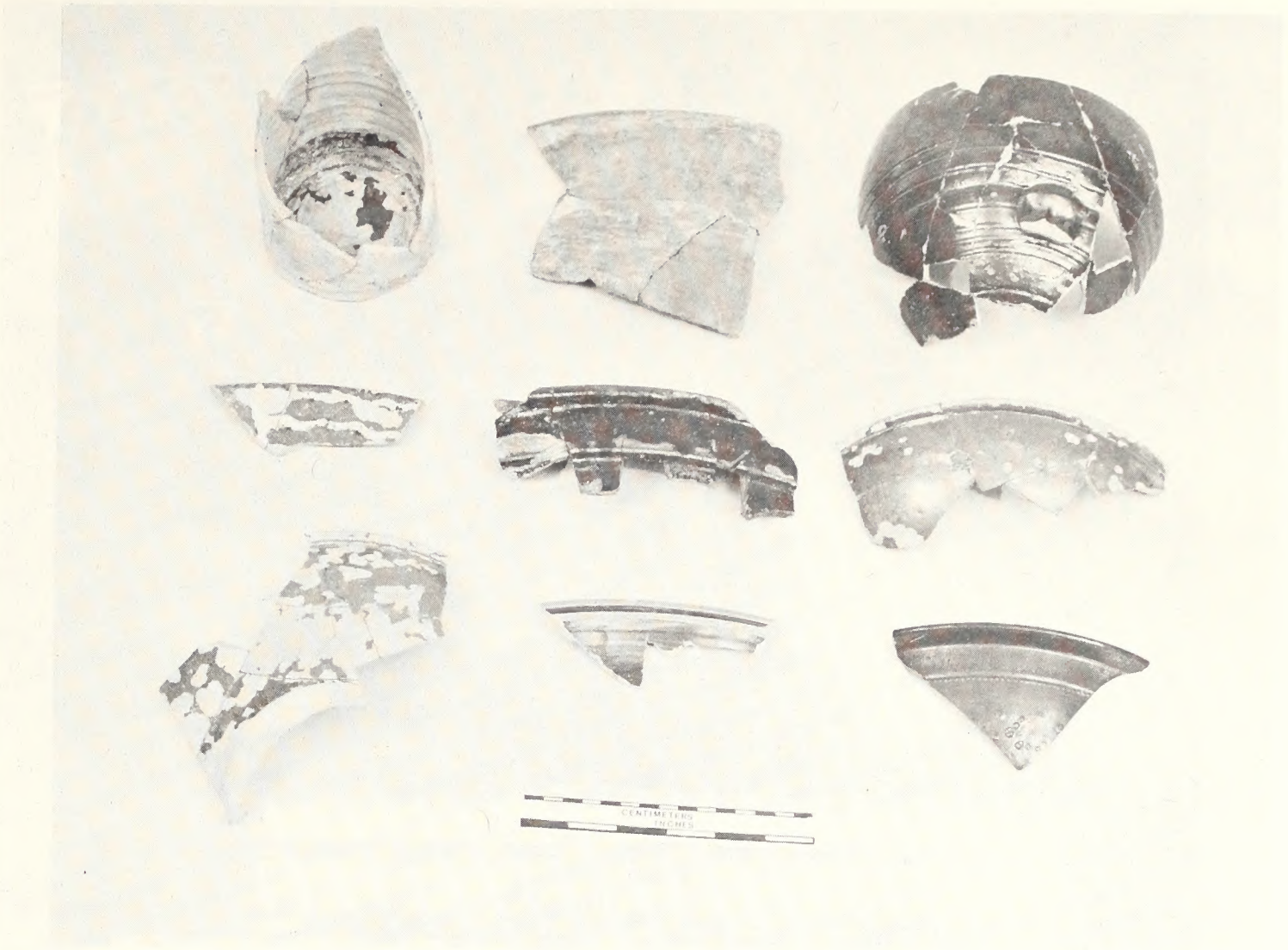


PLATE 25



PLATE 26

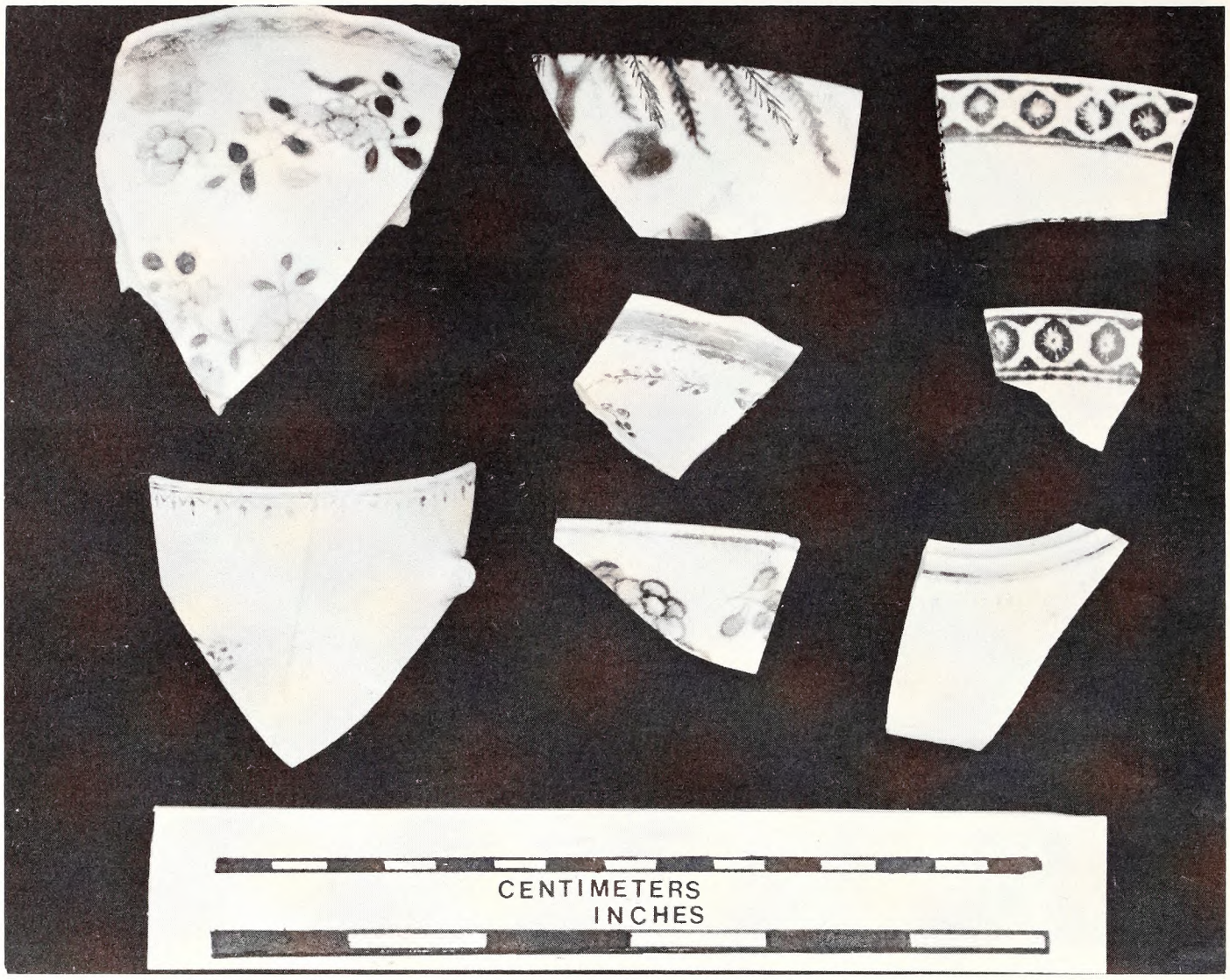


PLATE 27



PLATE 28

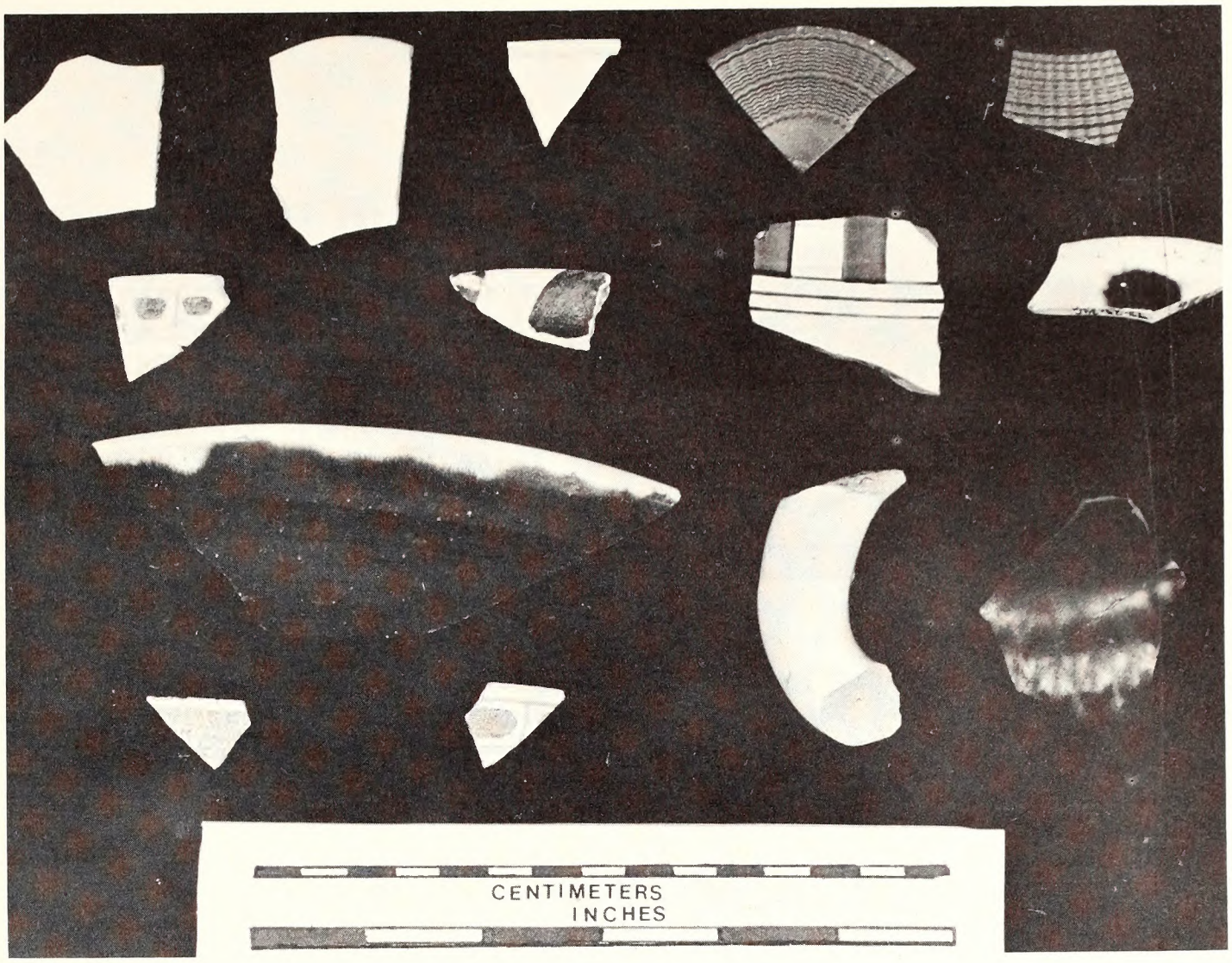


PLATE 29

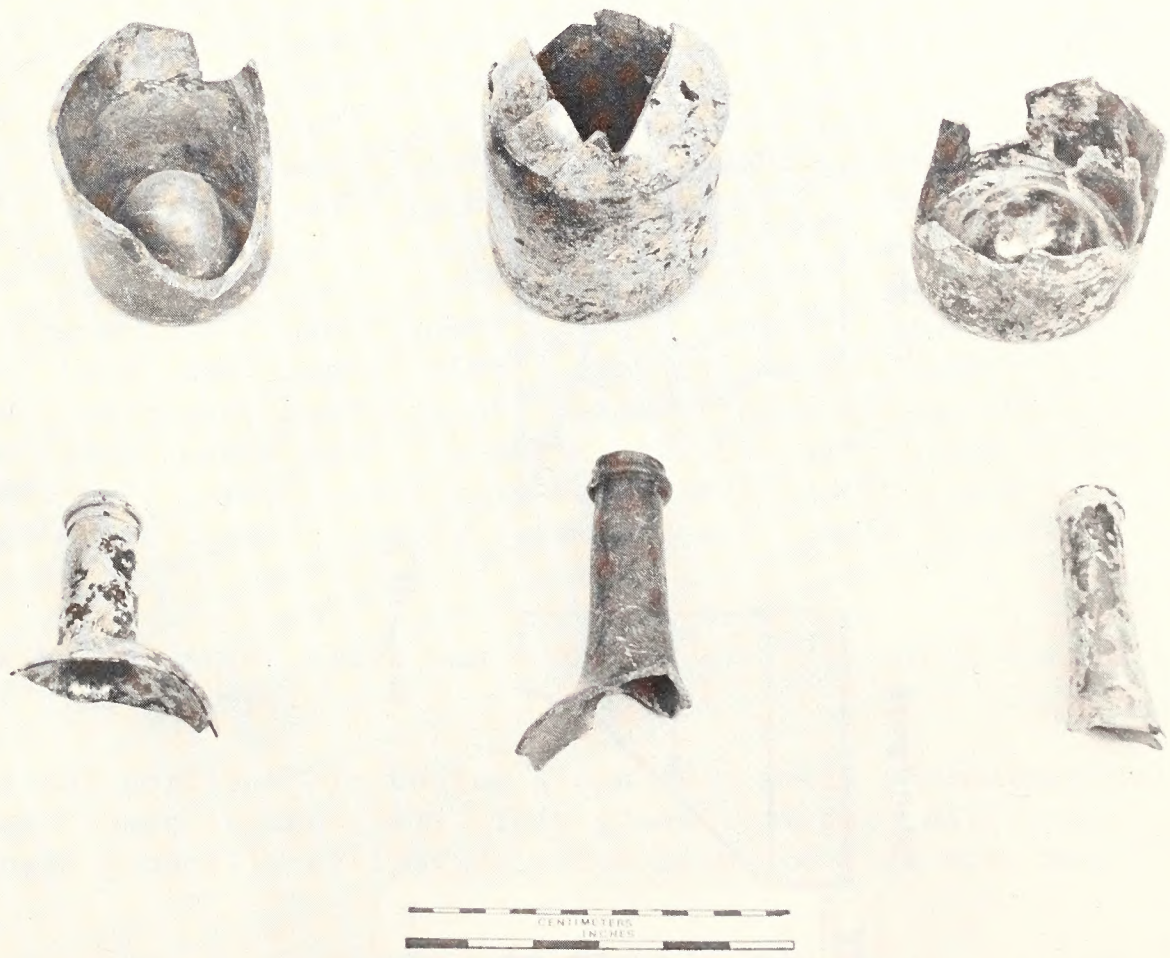


PLATE 30

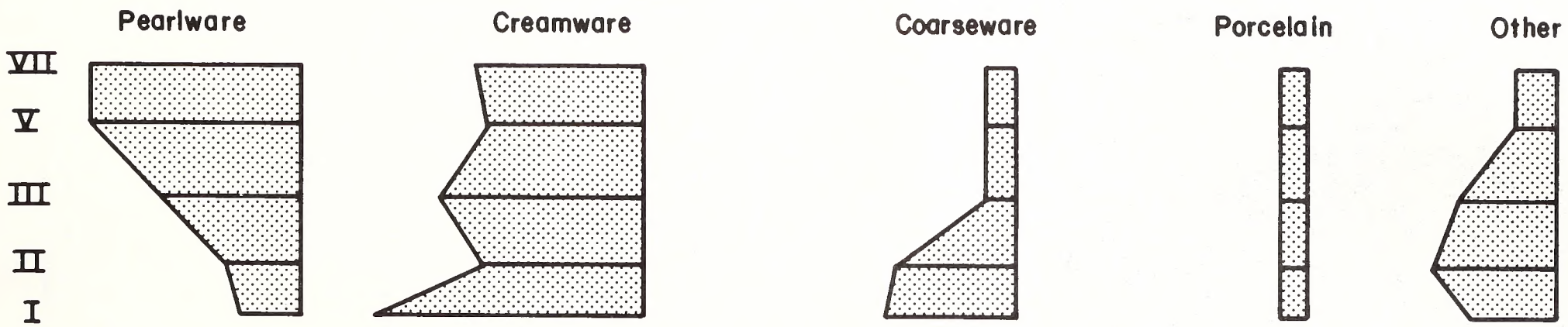


FIGURE 19
Ceramic Frequencies

Glass

Glass artifacts fall into various categories, including wine bottle, case bottle, glassware, pharmaceutical bottle, and window glass (Plates 30-33). For the purpose of this analysis only the presence of these types is considered. The following section on frequency variation covers the quantitative data.

Wine Bottle--Dark green wine bottle glass was common in the cellar fill (Plates 30 and 31). A total of 39 bottle bases and 35 bottle necks were recovered. Most of the bottles were of the straight sided cylindrical types common in the late eighteenth century. In addition, there was one neck with an applied string rim located well below the top. This attribute is similar to that found in wine bottles dating to the mid-seventeenth century (Noël Hume 1970:63), and may be a long curated bottle which did not find its way into the archaeological context for almost 150 years. There is also a long cylindrical neck which is similar to French wine bottles of the mid-eighteenth century (Noël Hume 1970:71).

Case Bottle--Square sectioned case bottle fragments were also common in the cellar fill. A total of 23 bases and 8 necks were recovered (Plate 31).

Glassware--Glassware is comprised of all table glass including tumblers, stemware, and decanters. The occurrence of these artifact classes in the fill was not common, though several noteworthy forms were present (Plate 32).

The majority of the stemware fragments were of the plain trumpet shaped type which Noël Hume dates to the last quarter of the eighteenth century (1969:23). One stem was a knopped air twist form which dates after ca. 1750 (Noël Hume 1969:20), and another was a simple plain knopped form which is probably also from after ca. 1750.

Tumbler forms were also infrequent. These included both plain clear metal forms and several fluted glasses. Most noteworthy was the presence of numerous pieces of wheel engraved glass. Noël Hume has noted problems with the dating of this decorative technique (1969:24-27), which generally occurs during the first half of the eighteenth century, though examples are common in later contexts.

No discernible decanter glass was found in the fill other than a single cut glass stopper.

Pharmaceutical Bottle--Thin bodied glass from small pharmaceutical bottles was common in the fill. This glass took many different forms, though generally cylindrical free blown bottles were most

ARTIFACT PLATES 31 THROUGH 34

Plate 31: Selection of Case Bottle and Wine Bottle Glass.

Note wine bottle neck at lower left with string rim typical of mid seventeenth century English bottles. Also note lower right bottle base demonstrating differential preservation of glass in different contexts.

Plate 32: Selection of Glass Tableware including Tumblers, Wine Glass Stems, and a Decanter Stopper.

Note wheel engraved tumbler, lower left.

Plate 33: Selection of Pharmaceutical Bottle Glass.

Note Middle row from left, embossed--BY THE KINGS PATENT ESSENCE OF PEPPERMINT.

Plate 34: Selection of Activity Group Related Iron Artifacts Including Equestrian Equipment (Bits, Horseshoe, Saddle Tree, D-Ring) and Construction Equipment (Pulley, Carpenter's Plane, Pestle, and Auger).

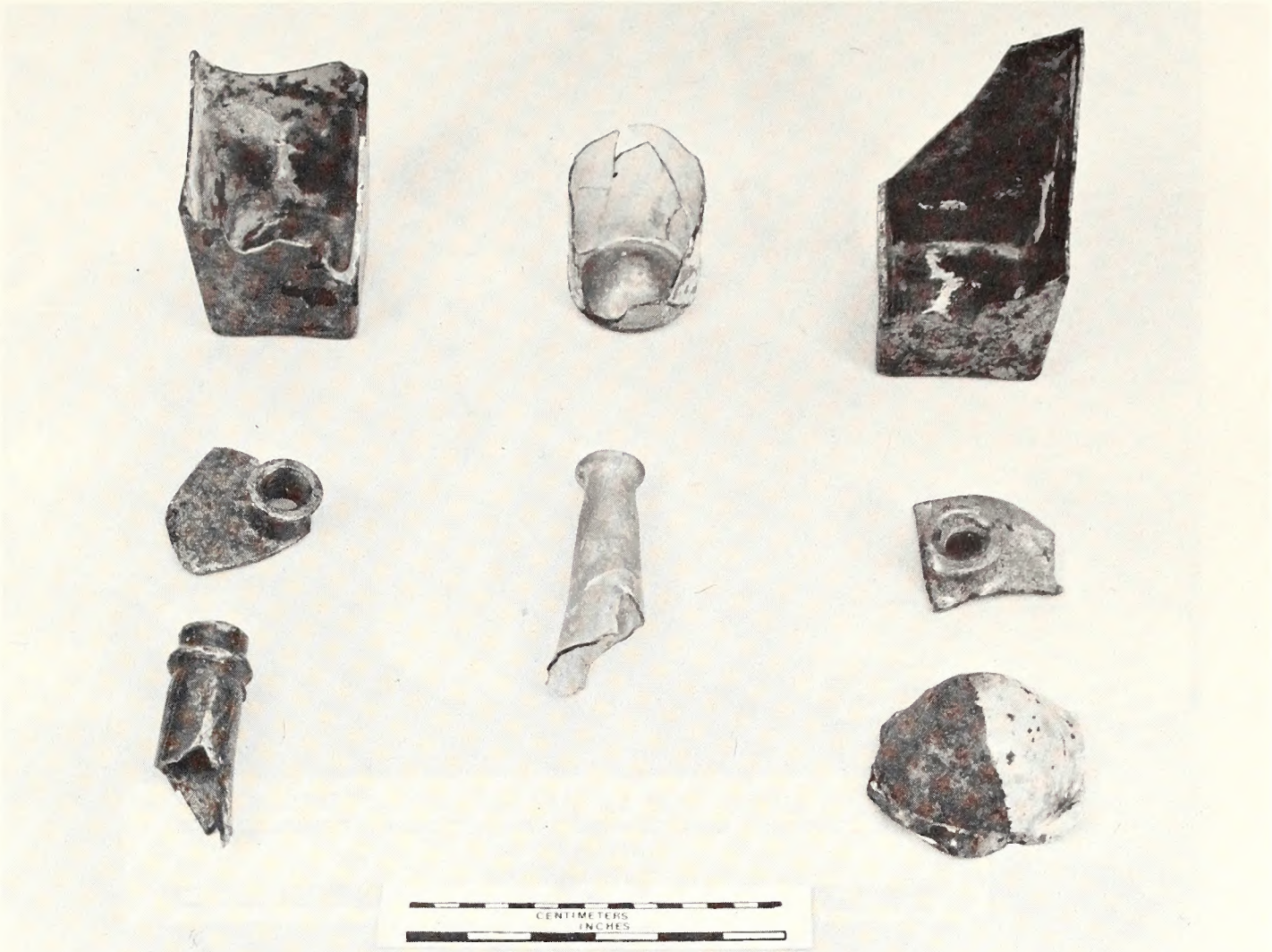


PLATE 31



PLATE 32



PLATE 33



PLATE 34

frequent. One nearly intact bottle of clear metal bore the embossed marking "BY THE KING'S PATENT ESSENCE OF PEPPERMINT". This square bodied bottle probably dates to the late eighteenth century (Noël Hume 1970:75).

Window Glass--By far the largest group of glass artifacts present in the fill were shattered fragments of blue-green window glass. The glass fragments appear to be similar in terms of manufacture but full analysis was greatly hampered by the extremely patinated condition of the glass. Window glass remained at high frequencies in all levels, however, the glass was most common in Stratum III and Stratum V. Stratum V is a demolition related level so the glass contained in it is probably directly relatable to the structure's demise. Since Stratum III is associated with later renovations involving intentional filling of the cellar, much of the glass recovered from this level may have been simply a constituent part of the fill rather than associated with the actual structure. However, since this stratum has been related to renovation, the glass contained in it may have come from the replacement or repair of windows.

Iron Artifacts

As would be expected, iron objects were represented in the assemblage by a variety of types and forms. All were heavily encrusted with iron oxides. Unfortunately, facilities and time for cleaning objects were not available so that the photographs presented show the artifacts in their excavated condition, with only mechanical cleaning of rust lumps (Plates 34-37).

The largest group of iron artifacts was nails, with a total of 5573 whole and fragmentary examples recovered. Twenty-five percent of the nails came from the destruction levels and can be related to the dismantling of the structure. Virtually all of the nails were hand wrought, with the only exceptions coming from the uppermost fill levels. No attempt was made to further classify these nails according to such specific functional categories as flooring nails, roofing nails, finishing nails, et cetera, nor was size taken into consideration in the analysis. A large percentage of the nails was so completely encrusted with rust that such an attempt would have had little utility.

The remainder of the iron fell into a variety of categories. The largest number were knife blades or blade fragments from table knives. Iron buckles of several varieties were common. Construction tools included fragments of a plane, a chisel, a saw blade, and an auger. Various types of hardware were also represented, such as door hinges, pintles, a window sash weight, hasps, and a variety of locks, both stock and pad. Equestrian gear was represented by two saddle tree fragments and a single horseshoe.

ARTIFACT PLATES 35 THROUGH 38

Plate 35: Selection of Personal Iron Artifacts Including Shoe Buckles, Keys, Pocket Knife, Scissors, Small Buckles, a Pistol Side Plate, a Bayonet Fragment, and a Knife Sheath.

Plate 36: Selection of Architectural Related Iron Artifacts, Including Hinges, Doorknob, Pintle, Stock Lock, Padlock, and Window Sash Weight.

Plate 37: Selection of Iron Kitchen Ware Including Iron Spoon, Pot Fragments, Grate, Fork Fragments, Bone Handle Knife, Two Knife Blades, and Pot Handle.

Plate 38: Selection of Tobacco Pipe Artifacts.
Upper Row Includes Anthropomorphic Reed Stemmed Bowls of Possible North Carolina Manufacture. Remainder are Kaolin Clay.



PLATE 35



PLATE 36



PLATE 37



PLATE 38

Tobacco Pipe Fragments

An unusual feature of the artifact assemblage was the small quantity of tobacco related artifacts. A total of only 438 pipe stem fragments were recovered from the fill. Based on the occurrence of bowl fragments, an estimate was made that there were at least 16 different bowls of English origin. In addition to the white clay objects, fragments of 3 or 4 reed stemmed pipe bowls of possible western North Carolina manufacture were also recovered. One of these carries an anthropomorphic motif.

Several of the white clay stems were slipped at the mouthpiece with a thin yellow glaze. Marks were infrequent and generally uninformative. One bowl had a stamped "16" beneath a crown on the bottom of the bowl's heel with very unclear coats of arms on either side of the bowl's base. Three decorated pipe stems were recovered representing at least two different pipes (Plate 38).

Buttons

A total of 126 buttons and button fragments were found. Nearly half of these (63) were single hole bone button discs (Plate 39). Though no evidence was found in the cellar for the manufacture of these items, it is noted that excavations on the adjacent courthouse site did contain the matrix for one of them, thus confirming that their manufacture was local. These discs ranged in size from slightly less than 1/2 inch (.40") to slightly larger than 3/4 inch (.78"), with clusters noted at 3/4 inch and approximately 1/2 inch (Fig. 20).

The majority of the remainder of the buttons was comprised of plain discs of brass, some tin plated or gilded, with attached brass eyes. Table 4 shows the frequency distribution of all buttons, excluding the bone discs.

In addition to the buttons, a few sleeve buttons or cuff links were found. One set was a pair of oval bone discs connected by a brass link. A similar one was located which appeared to be incomplete, thus raising a question of possible local manufacture. Other cuff links included two oval brass settings filled with either a ceramic or paste inset, and another with faceted dark glass in the setting.

Coins

Six coins were retrieved from the cellar fill and another was found on the surface east of the Bufflap house. Only four of these coins have been identified (Plate 40). The earliest was that found on the surface. Though very badly worn, enough of the obverse was visible to tentatively identify it as a William II halfpenny dating to ca. 1700 (Noël Hume 1970:157).

ARTIFACT PLATES 39 AND 40

Plate 39: A Wide Selection of Buttons, Buckles, and Thimbles Recovered From Cellar Fill.

Plate 40: Coins Recovered From Fill.

Top Row, Left to Right

1. William II Halfpenny Circa 1700
2. 1787 Connecticut Cent, Copper

Second Row

Quartered British Coin of Unknown Date, Silver

Lower Row, Left to Right

1. 1730 George II Halfpenny
2. 1778 George III Halfpenny

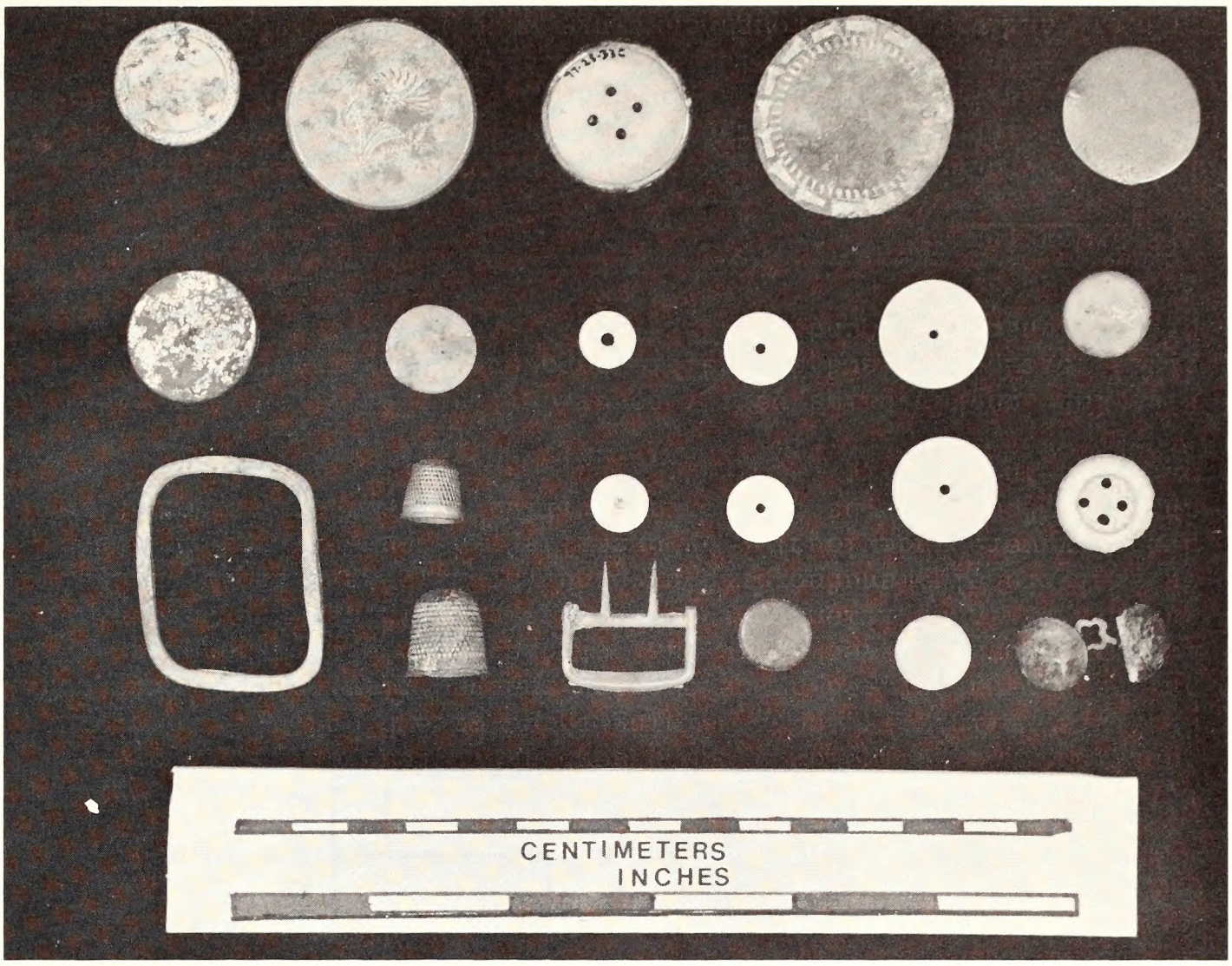


PLATE 39

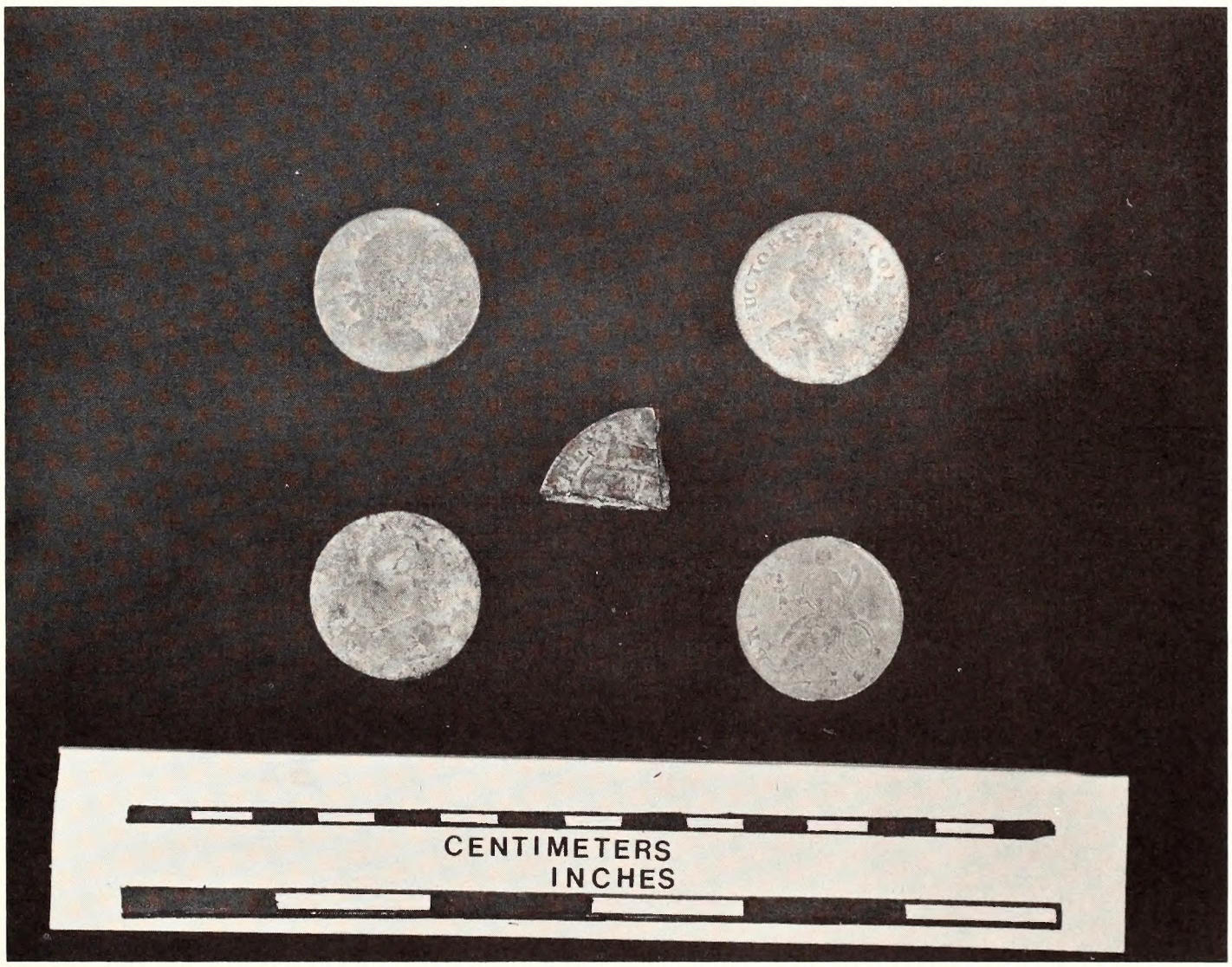


PLATE 40

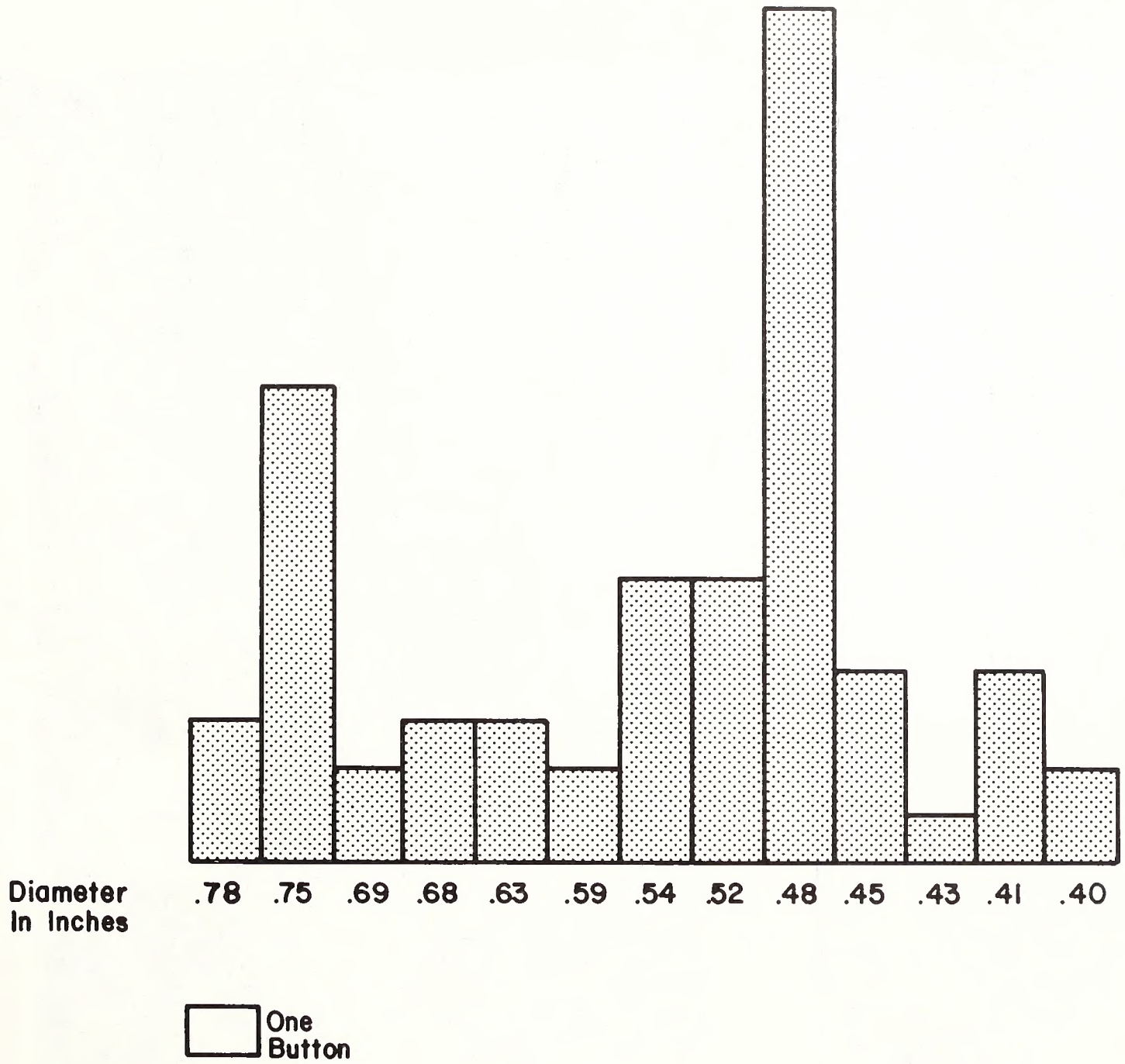


FIGURE 20
Single Hole Bone Button Diameters

TABLE 4

Frequency Distribution of Button Types
Excluding Single Hole Bone Buttons

TYPE	NUMBER
Four hole milk glass	3
Tinplated plain with iron eye	4
Tinplated, spun back	5
Plain or plated brass, type 9	21
Decorated brass	2
"gilt" or "plated"	5
Convex obverse	3
Bone backed	4
Embossed button faces with no backs	4
Pewter-cast	6
Embossed cover, brass back	1
Four hole bone	1
Ceramic	1

A copper George II young head halfpenny was found in the upper loam stratum. This coin was also badly worn, but the date appears to read "1730". The dark clay loam produced a dated 1778 George III halfpenny. The final identifiable coin was from disturbed fill beneath the southern wall of the Bufflap house. This was a dated 1787 Connecticut cent.

A quartered silver coin was located. Though in reasonably good shape, it bears no readily identifiable markings other than a portion of the coat of arms and the word "REX", indicative of British origin. The other two coins were far too badly corroded to be identified.

Personal Items

A number of small personal items were among the artifacts recovered (Plate 41). Such items included a gold plated brass watch key, a small brass brooch, a brass necklace with a gold plated jewel setting, fragments from a bone fan, a decorative brass comb and an iron jaw harp. Also found were 8 brass objects which proved to be struts from an umbrella (Audrey Noël Hume, Personal Communication, 1977).

Gunflints and Weaponry

Evidence for the use of firearms was limited. A total of seven gunflints was included in the assemblage. Four of these were of dark gray flint and the remaining three were blond. All but one had been manufactured by retouching snapped flint blades (Plate 42). The manufacturing technique was not discernible for the other gunflint. In addition to the definite gunflints there were also several crudely manufactured cryptocrystalline artifacts which probably were made locally by unskilled knappers. Evidence for this was found in the form of unmodified waste flakes which also occurred in the fill.

Five lead musket balls were recovered (Plate 42). An iron side plate to a pistol and a possible bayonet fragment were the only actual gun parts found.

Brass Working

Limited evidence was retrieved which points to a possibility of brass working on or near the site. Two lumps of brass casting sprue and a fragment of a slag coated graphite crucible were the only objects recovered which can be readily related to this special activity. No rough castings were found (Plate 43). Perhaps related is a hammered sheet of lead which may have been used in the working of metal. The data, however, are insufficient to reach a solid conclusion.

ARTIFACT PLATES 41 THROUGH 43

Plate 41: Selection of Personal Items Including Two Brass Umbrella Struts, Brass Necklace with Gold Plated Jewel Setting, Bone Fan Fragments, Clay Marbles, Carved Bone Objects, Glass Intaglio, Small Brooch, and Gold Plated Watch Key.

Plate 42: Selection of Weaponry Related Artifacts.

Top Row

Lead Musket Balls of Varying Sizes

Second Row

Snapped Blade and Gunflints

Lower Row, Left and Far Right

Flake Debris from Knapping Flints

Plate 43: Selection of Brass Artifacts.

Top Row, Left to Right

1. Brass Casting Sprue
2. Graphite Crucible Fragment with Fragments of Slag Adhering to Interior
3. Brass Casting Sprue
4. Brass Stopcock from Bung Tapper

Second Row, Left to Right

1. Small Apothecary Brass Weight, 3 Chrome, 4 Sap
2. Pair of Brass Dividers or Compass
3. Brass Harness Boss

Lower Row, Left to Right

1. Brass Curtain Rings
2. Brass Drawer Pull
3. Decorated Brass Furniture Hinge
4. Brass Key Escutcheon Plate

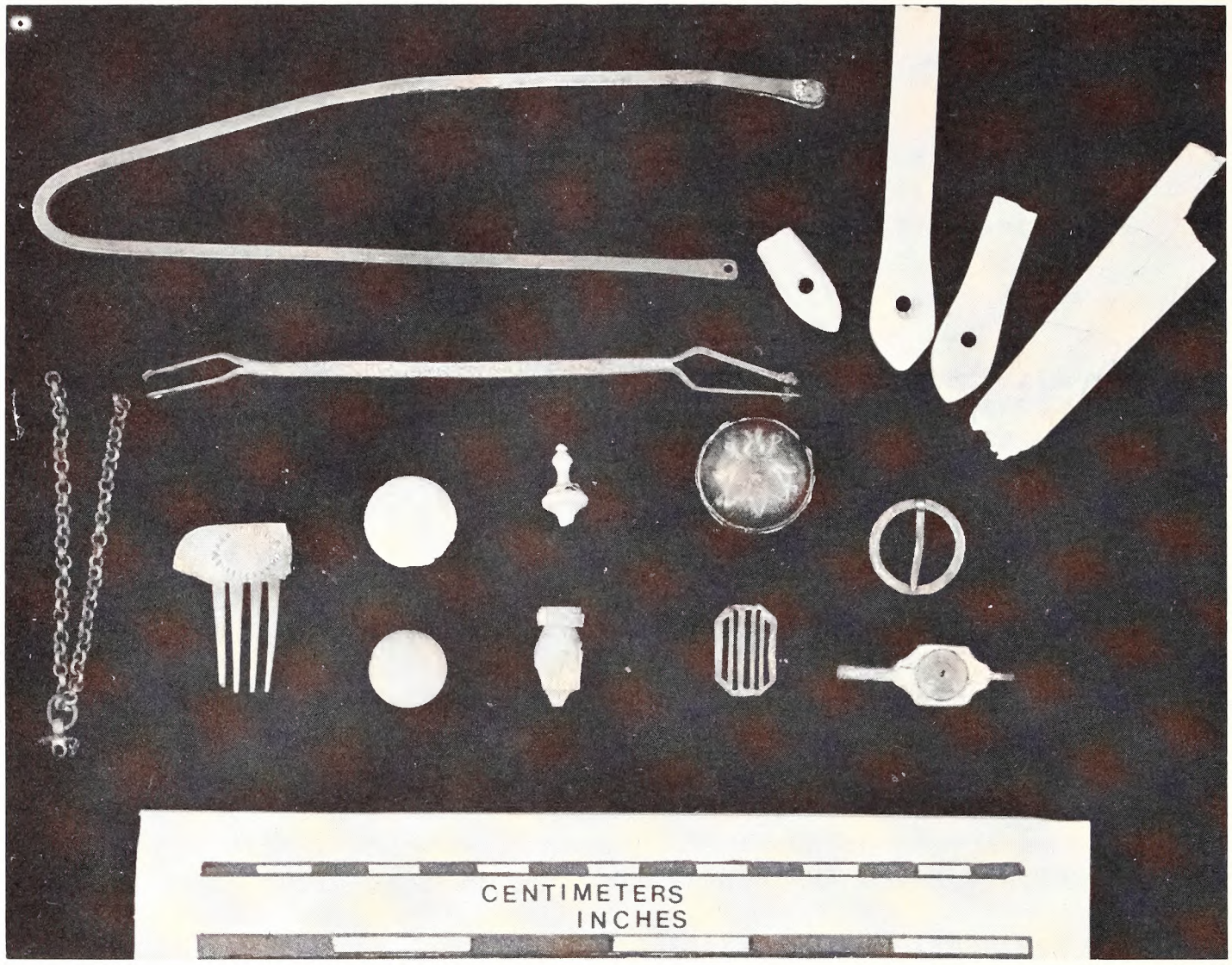


PLATE 41

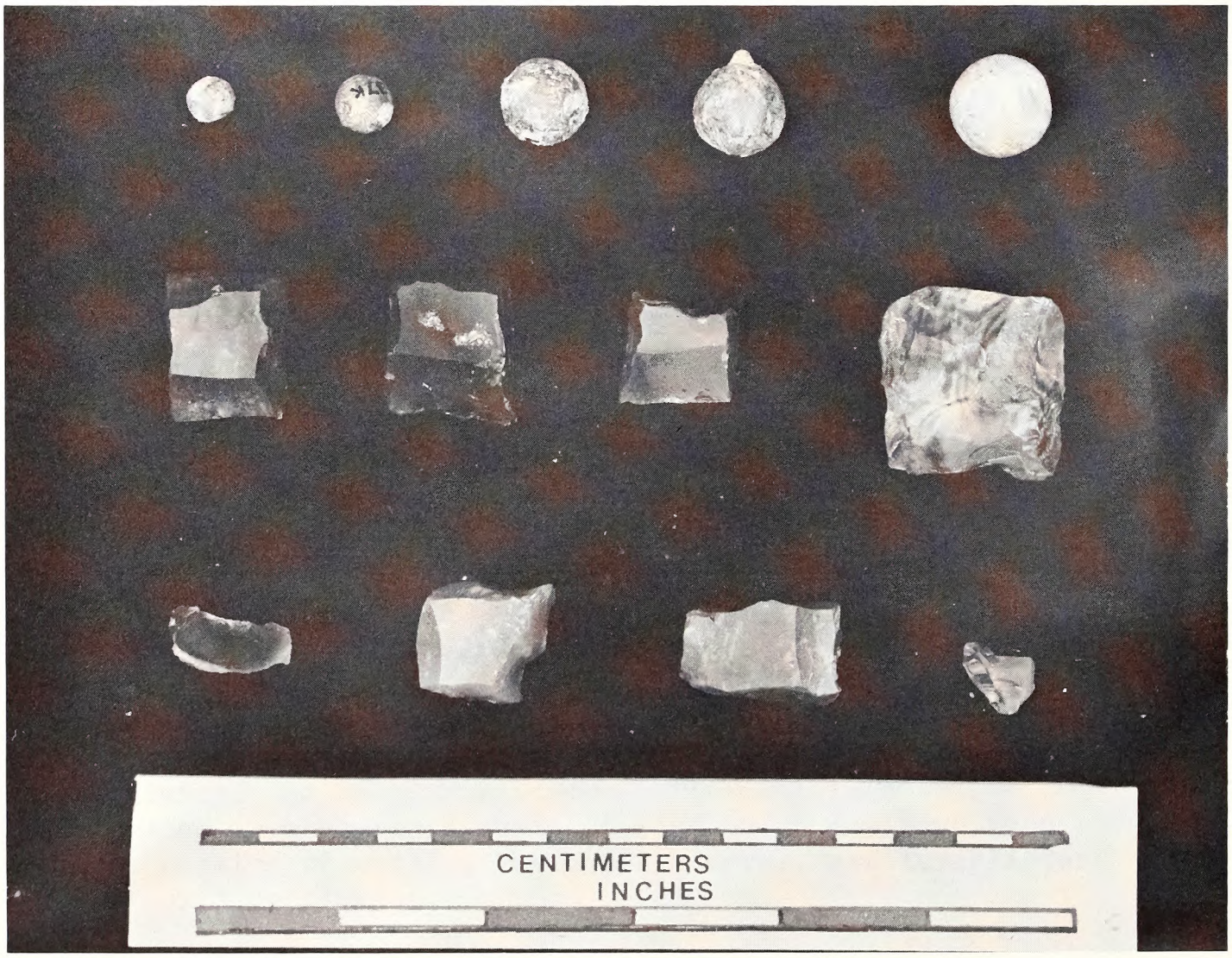


PLATE 42

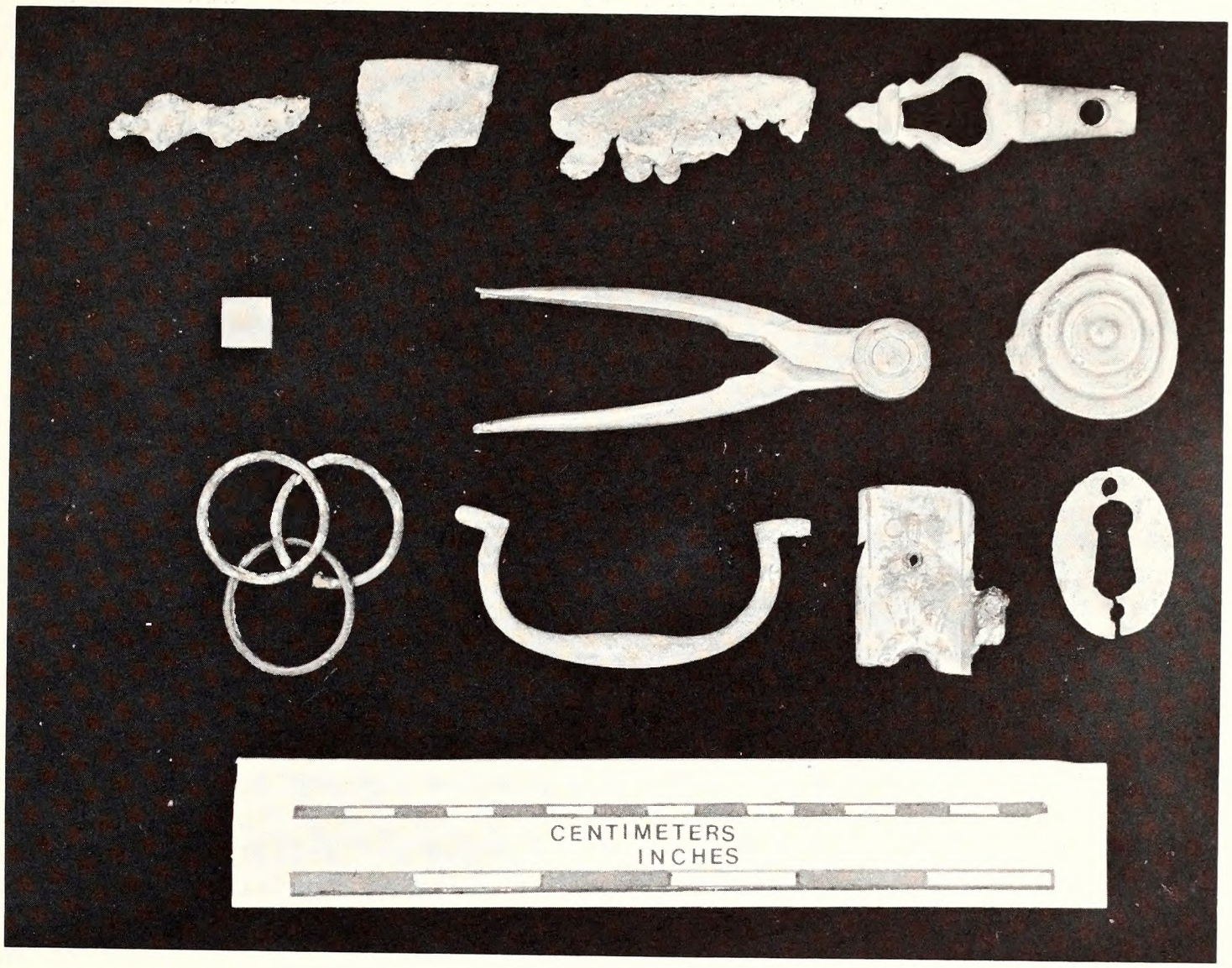


PLATE 43

Miscellaneous

Numerous other artifacts not covered by the above categories were present. Such items as pins, scissors, and thimbles can be related to tailoring. Four brass buckles were recovered. Furniture related items included keyhole escutcheon plates, drawer pulls, a brass drawer plate, and 19 upholstery tacks. Other small finds included a pair of brass dividers, a compass, marbles, and jewelry (Plates 35, 39, 41, and 43).

There are far too many objects to mention in the text. It is sufficient to note that the entire assemblage seems representative of numerous activities. Many of the items not covered above are illustrated in Plates 15-43.

Faunal Remains

Due to a lack of a knowledgeable faunal expert and the large size of the bone collection (25.6 percent of the assemblage), no detailed analysis of the faunal remains was undertaken. It is recommended that such a project be conducted in order to determine the makeup of the remains. A cursory inspection of the samples showed that cow, pig, deer, and fish bones made up the bulk of the fragments, with turkey and chicken also present.

VII. ANALYSIS OF ARTIFACT FREQUENCY DISTRIBUTION

In his recent book, Method and Theory in Historical Archaeology, Stanley South makes the statement:

> Through the study of frequency variations in the archaeological record, the archaeologist gains some appreciation for the dynamic conditions in the context of which his static facts were generated (1977:83).

The preceding section has been mainly a laundry list of various artifacts present in the cellar fill. In this section the same data are placed in the framework suggested by South in order to get to the "dynamic conditions in the context of which [the] static facts were generated." There may be some confusion over the meaning of this statement. As has been stated many times by archaeologists, each site should be viewed not as a separate entity, existing of and by itself, but rather as a subsystem of a larger encompassing cultural system. This can be applied to the Edenton cellar excavation by taking the position that the artifactual evidence, expressed as varying frequencies of predefined categories, will conform to recognizable patterns which are representative of Anglo-American colonial sites. In order to ascertain the character of these patterns it is necessary to have amassed similarly quantified data from many sites.

Because the historical records indicate that the structure in question probably served as an industrial operation during the 1760s, an hypothesis concerning expected frequency distributions can be made. If it is assumed that the building was used solely for the manufacture of tobacco, then certain artifact classes should be affected. In particular, the kitchen group (as defined by South 1977:95-6), which should reflect the intensity of food preparation, et cetera on the site, would be expected to be low compared to domestic sites. Co-varying with the kitchen group, it would be expected that the activities group artifacts would reflect the presence of special activities by being disproportionately high. The problem which is encountered in testing this hypothesis is founded in the specific nature of the industry. Very few, if any, artifacts relating to the manufacture would be preserved in the archaeological context. Tobacco manufacture was predominantly a labor intensive operation with a large portion of the work, such as stripping the stems from the leaves, being done by hand without tools. Much of the necessary equipment, such as the tobacco wheel, could have been made of wood, and would therefore not be preserved. The only specialized object which may be expected to be preserved would be small snuff graters against

which brittle leaves and stalks were rubbed to produce fine flakes. But such objects are generally limited to personal use and their presence in a large scale operation would be unlikely where large mills, perhaps turned by horse power, would be more efficient.

Related to this problem is the documentary evidence which tells little of the use of the structure after the demise of the Snuff and Tobacco Manufacture. Archaeological evidence suggests that the structure stood and was used for unknown purposes until at least ca. 1790, a full twenty years after the assumed end date for the manufacture. Thus, the hypothesis can be refined to include a statement that frequency distributions from upper fill levels will contrast with the floor level, and will reflect the postulated change in the structure's use.

Tables 5 through 12 show the frequencies of the various artifact classes by strata and for the total cellar fill. As can be seen, there are some distinctive differences between the floor level distributions and those for the upper fill levels. These differences, however, do not affect the artifact classes which were postulated. The major differences occur in the clothing group and arms group, where no artifacts were present in the floor level. In addition, the tobacco pipe group is significantly higher for the floor level, at 20.1 percent of the total assemblage for the strata. This frequency is enormously high when compared to the five sites studied by South (1977:104-5); but as South states:

> This artifact group is actually a class kept separate because it was expected to vary widely between ruins depending on the pipe smoking habits of the occupants represented by the archaeological record (South 1977:105).

Therefore, questions arise concerning the disproportional frequency of pipe related artifacts.

It is tempting to interpret the tobacco related items on the result of activities surrounding the manufacture of pipe tobacco, but this would be pure speculation, as no demonstrated relationship has been made. It should also be kept in mind that the floor level may not have been formed until after the demise of the industrial activity.

It appears that the best explanation of this phenomena is that the cellar, while open, was a popular place to smoke. As South points out, "No independent explanation for the wide variability can be suggested other than variability in behavioral habit . . ." (South 1977:105).

TABLES 5 THROUGH 12

Artifact Class Frequencies - Various Strata

TABLE 5

Artifact Class Frequencies
Stratum I

	Number	%
Kitchen Group	183	45.9
Ceramics	34	
Wine bottle glass	28	
Case bottle glass	88	
Tumbler	3	
Pharmaceutical	30	
Bone Group	(88)	
Architectural Group	133	33.3
Window glass	64	
Nails	67	
Spikes	1	
Hardware	1	
Furniture Group	0	
Arms Group	1	0.3
Clothing Group	0	
Personal Group	0	
Tobacco Pipe Group	80	20.1
Activities Group	1	0.3
Other	1	0.3
TOTAL	399	100.2

TABLE 6

Artifact Class Frequencies
Stratum II

	Number	%
Kitchen Group	1104	43.5
Ceramics	538	
Wine bottle glass	308	
Case bottle glass	96	
Tumbler	79	
Pharmaceutical	81	
Tableware	1	
Kitchenware	1	
Bone Group	(674)	
Architectural Group	1226	48.3
Window glass	830	
Nails	392	
Spikes	1	
Hardware	2	
Door lock parts	1	
Furniture Group	4	0.1
Arms Group	8	0.3
Musket balls	5	
Gunflints	2	
Gun parts	1	
Clothing Group	22	0.9
Buckles	1	
Thimbles	1	
Buttons	14	
Pins	6	
Personal Group	1	0.04
Personal items	1	
Tobacco Pipe Group	137	5.4

Table 6 (cont.)

Activities Group	38	1.5
Farm tools	1	
Colono Indian pottery	34	
Storage items	1	
Stable and barn	1	
Miscellaneous hardware	1	
TOTAL	2536	100.04

TABLE 7

Artifact Class Frequencies
Stratum III

	Number	%
Kitchen Group	2449	39.0
Ceramics	1488	
Wine bottle glass	454	
Case bottle glass	303	
Tumbler	164	
Pharmaceutical	32	
Tableware	2	
Kitchenware	6	
Bone Group	(1618)	
Architectural Group	3550	56.5
Window glass	2752	
Nails	791	
Spikes	2	
Door lock parts	5	
Furniture Group	23	0.4
Arms Group	1	0.02

Table 7 (cont.)

Clothing Group	43	0.7
Buckles	3	
Buttons	28	
Scissors	1	
Pins	10	
Fasteners	1	
Personal Group	16	0.3
Coins	2	
Personal items	14	
Tobacco Pipe Group	66	1.1
Activities Group	132	2.1
Construction tools	5	
Colono Indian pottery	117	
Storage items	2	
Stable and barn	3	
Miscellaneous hardware	1	
Other	4	
TOTAL	6280	100.12

North Carolina State Library
Raleigh

N. C.
Doc.

TABLE 8

Artifact Class Frequencies
Stratum IV

	Number	%
Kitchen Group	140	64.5
Ceramics	103	
Wine bottle glass	14	
Case bottle glass	9	
Tumbler	13	
Tableware	1	
Bone Group	(75)	
Architectural Group	71	32.7
Window glass	30	
Nails	40	
Spikes	1	
Furniture Group	0	
Arms Group	1	0.4
Gunflints	1	
Clothing Group	5	2.3
Buckles	1	
Buttons	2	
Pins	2	
Personal Group	0	
Tobacco Pipe Group	0	
Activities Group	0	
TOTAL	217	99.9

TABLE 9

Artifact Class Frequencies
Stratum V

	Number	%
Kitchen Group	1407	39.0
Ceramics	910	
Wine bottle glass	178	
Case bottle glass	205	
Tumbler	75	
Pharmaceutical	33	
Tableware	5	
Kitchenware	1	
Bone Group	(1090)	
Architectural Group	2150	59.6
Window glass	753	
Nails	1392	
Spikes	1	
Hardware	1	
Door lock parts	3	
Furniture Group	1	0.03
Arms Group	0	
Clothing Group	30	0.8
Buckles	3	
Buttons	20	
Pins	6	
Beads	1	
Personal Group	4	0.1
Keys	1	
Personal items	3	
Activities Group	17	0.5
Colono Indian pottery	4	
Storage items	8	
Stable and barn	1	
Miscellaneous hardware	1	
Other	1	
Military items	2	
TOTAL	3609	100.03

TABLE 10

Artifact Class Frequencies
Stratum VI

	Number	%
Kitchen Group	776	55.9
Ceramics	567	
Wine bottle glass	86	
Case bottle glass	33	
Tumbler	71	
Pharmaceutical	19	
Bone Group	(573)	
Architectural Group	564	40.6
Window glass	256	
Nails	308	
Furniture Group	6	0.4
Arms Group	1	0.07
Musket ball	1	
Clothing Group	10	0.7
Buckles	1	
Thimbles	1	
Buttons	6	
Pins	2	
Personal Group	6	0.4
Coins	1	
Personal items	5	
Tobacco Pipe Group	23	1.7
Activities Group	1	0.07
Stable and barn	1	
TOTAL	1387	99.84

TABLE 11

Artifact Class Frequencies
Stratum VII

	Number	%
Kitchen Group	4248	50.7
Ceramics	3127	
Wine bottle glass	381	
Case bottle glass	282	
Tumbler	200	
Pharmaceutical	227	
Tableware	20	
Kitchenware	11	
Bone Group	(3784)	
Architectural Group	3892	46.4
Window glass	1371	
Nails	2512	
Spikes	3	
Hardware	3	
Door lock parts	3	
Furniture Group	9	0.1
Arms Group	8	0.09
Musket balls	1	
Gunflints	7	
Gun parts	0	
Clothing Group	79	0.9
Buckles	5	
Thimbles	0	
Buttons	45	
Scissors	1	
Pins	23	
Fasteners	0	
Beads	5	
Personal Group	12	0.1
Coins	2	
Keys	2	
Personal items	8	
Tobacco Pipe Group	93	1.1

Table 11 (cont.)

Activities Group	40	0.5
Construction tools	5	
Toys	4	
Colono Indian pottery	7	
Storage items	7	
Stable and barn	1	
Miscellaneous hardware	14	
Other	2	
TOTAL	8381	99.89

TABLE 12

Artifact Class Frequencies
All Strata

	Number	%
Kitchen Group	10,670	45.6
Ceramics	7,096	
Wine bottle glass	1,469	
Case bottle glass	1,030	
Tumbler	605	
Pharmaceutical	422	
Tableware	29	
Kitchenware	19	
Bone Group	(7,998)	
Architectural Group	11,749	50.2
Window glass	6,147	
Nails	5,573	
Spikes	10	
Hardware	7	
Door lock parts	12	
Furniture Group	44	0.2

Table 12 (cont.)

Arms Group	18	0.01
Musket balls	5	
Gunflints, etc.	12	
Gun parts	1	
Clothing Group	192	0.8
Buckles	14	
Thimbles	2	
Buttons	117	
Scissors	3	
Pins	49	
Fasteners	1	
Beads	6	
Personal Group	41	0.2
Coins	5	
Keys	3	
Personal items	33	
Tobacco Pipe Group	457	2.0
Activities Group	230	1.0
Construction tools	10	
Farm tools	1	
Toys	4	
Colono Indian pottery	162	
Storage items	18	
Stable and barn	7	
Miscellaneous hardware	17	
Other	9	
Military objects	2	
TOTAL	23,401	100.01

Though the floor level does demonstrate these significant differences with relation to the upper fill levels, the first hypothesis proposed (that kitchen group artifacts would demonstrate a low frequency while the activities group would be high) can be rejected. The kitchen group frequency fell at 45.9 percent, well within the limits defined by the other levels; while, on the other hand, the activities group was low, represented by a single artifact, that being an iron pestle.

Further analysis of the frequency distribution reveals few significant variations between levels. Stratum V, the destruction rubble, is high in the architectural group, as is Stratum III. This is understandable for the rubble but raises some question about the nature of the dark clay loam. It is noted that a very high proportion of the architectural group in Stratum III is composed of window glass. It is possible that the glass came from the breakage of windows in an abandoned structure. This could well be true, particularly when the window glass count for Stratum V is considered.

In general, conclusions from this analysis fail to generate the proper data to fully ascertain the "dynamic conditions" at work in producing the noted artifact frequencies. This may be due, in large part, to the nature of the methods and classificatory system employed. Indeed, what is produced from this exercise is not an understanding of the dynamic conditions, but rather yet another set of virtually static data. In order to get beyond this problem, the archaeologist must tailor his methods to the specific problem being studied. Basing artifact analysis on comparison of the frequencies of individual pieces is fraught with assumptions. These are basically heuristic devices without foundation in the realities of the cultural system being analyzed. A few specific examples of the problem may serve to illustrate this dilemma.

South includes barrel bands among his activity group of artifacts (1977). Seldom does the archaeological record produce an intact barrel band, while fragments of these artifacts are almost as common as nails on some sites. Rhetorically, therefore, how many fragments constitute a barrel band? Another example which was experienced with the Edenton material was the presence of several brass umbrella struts. In all probability all were from the same umbrella, but no allowance was made for this in the classification, so that rather than being classified as a single "personal item" the eight struts were each counted separately. It is probable that on the intersite level of analysis, these various problems balance out enough to allow for valid comparison; but, when trying to extract the dynamic nature of a specific site's position in a cultural system, the method of quantitatively comparing ceramic sherd counts with window glass counts and individual whole artifacts (such as an unbroken iron object) seems shallow and almost without point. It is not at all surprising that the kitchen group and the

architectural group figure so highly in the frequency distributions when it is considered that these groups are comprised of the artifact types most likely to break into many pieces. The author does not reject quantification of artifacts, as should be amply demonstrated by the foregoing pages, but feels that the methods for employing it need to be more carefully considered and some of the biases built into it removed. For comparisons between sites such quantitative studies have great promise, but for placing each individual site into its own specific "dynamic context" other methods need to be employed.

Two related methods which begin to break through the barrier between the archaeologist and the cultural context of his data are cross-mending and vessel analysis. Although these are principally limited to the analysis of ceramics and glass, the relationships which can be established between strata and features by cross-mending aid in understanding the archaeological history of the site. Such an understanding is crucial before the site can be intelligently compared to other sites. Vessel analysis, that is, a determination of the minimum number of vessels and their form, helps to overcome the bias introduced by sherd counts.

Many of the same arguments made for extending quantification studies of artifact assemblages can also be held true for vessel counts. In fact, the quantification of vessels from a number of sites could, conceivably, be used to greater purpose than merely counting individual sherds. A whole gamut of research problems can be generated and tested with such data, and there is little doubt that these data are much closer to the cultural reality being examined than sherd counts.

For the Edenton assemblage, the cross-mending and vessel analysis succeeded in explaining the depositional history of the site far better than did the frequency distribution study. In addition, it raised new questions about assumptions which were based on the archaeological data.

Cross-mending

During the excavation, numerous proveniences were defined, both horizontally and vertically, in order to achieve control over the spatial distribution of artifacts. Vertical units were based primarily upon empirically noted differences in the fill. The archaeological analysis presented earlier demonstrated that, based upon determination of Mean Ceramic Dates, the successive strata had been deposited over a wide span of time. Consideration of the dates of these strata indicates that, except for the floor, all levels had accumulated in the cellar after ca. 1795. The near absence of certain ceramic types which became popular during the second decade of the nineteenth century suggests that the filling had been accomplished by approximately 1820.

From this analysis it is possible to formulate certain expectations for cross-mending. The first of these is that, because of attributes such as color and texture, each stratum represented fill placed in the cellar at a single discernible point in time. As such, it could be expected that cross-mending would reflect this time separation, resulting in mends between horizontal units but not between levels. A second expectation is founded on assumptions concerning the use of the building. Based partially upon the Sauthier Map's portrayal of the structure in 1769, which shows small gardens south of the building, the assumption is made that after being utilized as an industrial operation the building was converted to domestic use. Assuming, therefore, that it was a domicile for a single family, it would be expected that mends would result in several reconstructible ceramic vessels reflecting the ceramic tastes of the occupants.

The mending process had no sooner begun when the first expectation was found to be untrue. In fact, the cross-mending resulted in numerous cross-mends between all levels from the wash to the upper fill, thus tying all of the fill to the same archaeological time frame.

One particularly problematic attribute of the mending was the number of mends which crossed the thick rubble level, tying the dark clay loam (Stratum III) to the upper loam fill (Stratum VII). Of a total of 91 cross-mends, 33 tied sherds in the lower levels to those in the upper fill. Two possible explanations for this phenomena come to mind; (1) the mends are the result of mistakes in the excavation or improper bagging of artifacts in the field, or (2) the fill in the cellar was deposited over a short period of time with fill for the loam level and the upper fill coming from the same source.

Considering the first alternative, it is reiterated that segregation of materials in the field was scrupulously maintained. In addition, many of the cross-mending units were excavated at widely separated times, thus negating the possibility of misbagging. What does remain as a potential explanation would be areas of the cellar where vertical stratigraphy was unclear. It is noted that the three units, 77-25-34, 38, and 41, were along the line of the postholes where the post rose through the loam. It is possible that when the posts were removed the fill settled into the deeper levels. One particular artifact which demonstrates the possibility of this disturbance was an apothecary weight found in the clay loam with the royal mark "VR" for Victoria Regina. Victoria did not ascend the throne until 1837, so this artifact could not have been deposited prior to that date. Because the artifact assemblage would have been entirely different had the fill dated after 1837, it is probable that this single find is intrusive. In order to test the effect of this potential vertical displacement, the

number of mends between Stratum III and Stratum VII were computed. Of the 33 mends between these strata, 18 were within the three possibly disturbed units. The fact that the remaining 15 mends could not be explained by mistakes in excavation leaves only the quick fill alternative.

As has been demonstrated in the archaeology section, the chronology for the ceramic assemblage indicates that there was a difference in time between the strata. In addition, there is the brick underpinning located at the top of the clay loam which suggests strongly that the building was still in use at the time of deposition. This contradiction in the data needs further examination.

Vessel Analysis

A study of the ceramic assemblage based upon a determination of the minimum number of vessels could aid in providing further data for interpreting the above noted dilemma. Essentially, the methods employed for defining the vessels were based on a determination of distinctly different rim fragments. In a very few instances, vessels were defined on body sherds, bases, handles, or lids, but only when there were no rim sherds of the same ceramic type.

The vessel analysis was conducted concurrently with the cross-mending process so that it was possible to segregate the forms with a high level of certainty. Vessels were defined on the basis of type and form. The results of the distribution of these attributes are presented in Table 13.

The most important finding of the vessel count was the extremely large number of vessels represented. A minimum of 615 distinct ceramic vessels were identified. The distribution of these by ware is:

Ware	No.	Percent
Pearlware	221	35.9
Creamware	211	34.3
Porcelain	57	9.3
Tin Glazed Earthenware	13	2.1
White Salt Glazed Stoneware	15	2.4
Other Refined Wares	18	2.9
Coarse Earthenware	34	5.5
Stoneware	25	4.1
Lead Glazed Slipware	16	2.6
Coarse Agateware	4	0.6
Colono Indian	1	0.2

	Platter	Soup Plate	Plate	Plate/Saucer	Saucer	Plate/Dish	Dish	Dish/Bowl	Bowl	Cup/Bowl	Cup	Cup/Bottle	Tea Bowl	Mug	Egg Cup	Gravy Boat	Pitcher	Tea Pot	Creamer	Top	Chamber Pot	Jar	Milk Pan	Butter Pot	Storage Vessel	Jug	Pot	?	TOTAL	
Porcelain				1	15			1	13		16	1	2		1			1										6	57	
White Salt Glazed Stoneware			7		1				1		4																	2	15	
Tin Glazed Earthenware			1			2	3	1	4	1											1								13	
Other Refined Earthenwares			4						2		2							1		5	1							3	18	
Creamware		1	1	47	12	58				37	1	30			1		2	1	2	1	7	3						7	211	
Pearlware		3	1	59	6	69				27		37			1			1	2	2	4	1	1					7	221	
Coarse Earthenware										6					1							1	1	6	1	9	1	8	34	
Stoneware									1	2					5							3			1	2	8	3	25	
Colono Indian Ware																											1		1	
Slipware						3	1			5					2													5	16	
Coarse Agate Ware									3																			1	4	
TOTAL		4	2	118	19	143	5	4	6	97	2	89	1	2	10	1	2	2	6	3	16	10	2	6	2	11	9	1	42	615

TABLE 13

Ceramic Vessel Distribution

It is clear, on a subjective level, that this is far too many vessels to have been used and broken by one family group in the short period of time hypothesized for the filling of the cellar. Related to this unusually high number of vessels was a paucity of reconstructible vessels. Of the 615 vessels, 376 (61 percent) were represented by a single distinctive rim sherd. Another 149 vessels were defined by distinctive rim sherds and matching body sherds which did not mend. The remaining 90 vessels cross-mended to some degree, in some cases with only 2 sherds associated.

It is interesting to note that those few vessels which were represented by enough sherds to allow for significant reconstruction were generally closely clustered. Examples are a large lead oxide glazed coarseware storage pot which was closely clustered in the area of Stratum II adjacent to the east wall; a nearly complete Rhenish Stoneware mug was recovered from the rubble at the north end of the cellar; and a handpainted polychrome pearlware bowl was also clustered in the wash near the break in the eastern wall. The fact that these and other vessels diverge from the general pattern of the ceramic assemblage suggests that they are representative of different disposal patterns.

The cross-mending and minimum vessel estimate support a conclusion that the fill in the cellar was deposited over a very short period of time. The fact that so few reconstructible vessels were present would tend to argue for the fill not being primary deposition but rather that it was intentionally added to the cellar. The source of the fill (that is, Strata III and VII) must have been a primary or secondary refuse disposal area. Because the assemblage contains ceramics which represent a wide cross-section of types dating from the mid-eighteenth century to the second decade of the nineteenth century, it could be that the source of the fill was a peripheral or secondary trash disposal area (South 1977:297). It is important to note the proximity of the cellar to the natural ravine or slough and impounded pond to the west. Excavations into this pond fill during work on the adjacent courthouse site resulted in a ceramic assemblage which closely parallels the cellar fill in variability (Garrow, Haecker, and Hurry 1978). Thus, a probable source of the fill was the ravine. The multitude of vessels represented can be taken as indicative of trash disposed of by many nearby inhabitants, and need not be solely restricted to the occupants of the cellar structure. Because this fill is probably displaced secondary refuse (South 1977:297-8), it is possible to consider the assemblage as a random sample of the trash disposed of by various inhabitants of Edenton.

This assumption can be stated as a testable hypothesis. If the ceramic vessel data are considered as typical of a random sample of trash disposed of by several families, then an expectation can be generated with respect to the glassware from the site. There was, by no means, the same quantity of glassware as ceramics, so that the test was easily conducted. Based upon the ceramic

data, one would expect to find both great variability and a large number of vessels represented in the fill. Again, the determination of vessel number was based upon the occurrence of distinctive rims and also bases. As expected, it was found that though there was relatively little glassware in the total assemblage (605 pieces), there was a minimum of 27 distinct vessels based on rims.

Wheel Engraved	7
Fluted	2
Molded Decoration	1
Plain	17
Total	27

Based on distinct bases, there were determined to be 42 vessels including:

Fluted Base Fragments	9
Stemmed Bases	12
Wheel Engraved	1
Undecorated	20
Total	42

Most likely, the actual minimum number is somewhere between these two figures. The conclusion of this test is to substantiate the hypothesis that the ceramic vessel assemblage is not a fluke of the sample available but that it is, in fact, a valid representation of the trash disposed of in the pond or ravine.

A cursory analysis of wine bottles, case bottles and pharmaceutical bottle glass indicates that a similar pattern in the assemblage was occurring, with numerous individual bottles represented by a large quantity of non-mendable pieces. It is possible that a further test of this could be conducted through faunal analysis. Certainly a secondary peripheral refuse area, such as the postulated source for the cellar fill, would contain food waste from several households. Thus, an expectation would be that the minimum number of each animal species present would be high compared to a similar count for a one family distribution.

It is felt that the results of this analysis of the artifact assemblage have demonstrated that the fill in the cellar was not necessarily produced by occupants of the structure. Such a conclusion can be utilized to derive hypotheses concerning trash disposal practices in semi-urban settings. With the relatively high density of occupation, such natural features as ravines were used as common dumping grounds. A random sample of this material reflects the distribution of various artifact categories. By understanding the processes which resulted in the fill it is easier to draw conclusions about other analytic features to the assemblage, such as frequency distribution.

In fact, having determined the nature of the fill processes provides a better position from which to evaluate the entire assemblage. It is noted that the frequency of kitchen group artifacts is slightly lower than that projected by South for the Carolina Pattern, while the architecture group is consistently too high to conform to the pattern. The explanation for this discrepancy is most likely couched in the depositional history of the site. A legitimate query is raised concerning the applicability of the Carolina Pattern to sites whose artifactual assemblage does not necessarily represent the occupation of the site. The high architectural group could, indeed, suggest that at the time the building was dismantled it was, in fact, abandoned.

Before continuing, the author wishes to make clear that the foregoing analysis does not come close to complete coverage of the range of analytic problems which can be studied with the data available. The purpose has been to try to understand these data within the framework of the specific site. More detailed study of the assemblage could lead to a greater understanding of the various cultural processes in the eighteenth century Edenton setting.

VIII. SUMMARY AND SYNTHESIS

Historical Evidence--Documentary sources provide little useful information concerning the history of the structure being analyzed. Basically, there are three documents which relate to the site. The first is a 1764 deed which defines a piece of property fronting Church Street and identifies it as a Snuff and Tobacco Manufacture. The second is a 1769 deed which documents the sale of the Snuff and Tobacco Manufacture, and presumably marks a terminal date for its existence. The final evidence is the graphic portrayal of a structure on Church Street on the 1769 Sauthier Map of Edenton.

After 1769, no written records mention either structures or occupants of the property. The piece of land defined in the 1764 deed had been reconsolidated with the tanyard lots, thus causing any reference to structures in later deeds to be unhelpful.

Architectural Evidence--Data relating to the architecture of the structure is generally poor. In part this was due to time pressures during excavation which did not allow for extensive investigation of this aspect. All the data which are available are from the cellar itself and the cellar data are, in many ways, more confusing than elucidating.

Based on construction technique, mortar type, and builder's trench fill, it was postulated that the southern end of the cellar was the first phase of construction. The builder's trench fill did not contain artifacts which would indicate that the cellar was the first construction on the lot. No evidence was found for the superstructure, though it was demonstrated that this first structure may have been a small one bay frame building situated above the cellar.

Sometime prior to 1769, the cellar was expanded northward to its full excavated length. The northern retaining wall for the first period construction was dismantled, leaving only one course which was found during the excavation. This second building phase included the addition of a bulkhead entrance on the west side of the structure. A series of post holes were added crossing the cellar floor. These holes and the remains of the old retaining wall were covered by a level of mixed clay wash which entered the cellar through the bulkhead.

Again, difference in construction technique demonstrates that the northern and eastern walls were subject to repair sometime after ca. 1780. These walls were poorly built, with some of the wall block laid horizontally and others laid on edge. The northeast corner was not bonded together, indicating that the upper building was larger than the cellar.

The one aspect which stands out from an analysis of the architectural data is that the building is most likely vernacular in style, and therefore does not conform to set building traditions or popular styles present in Colonial America prior to the Revolution. The fact that the building was originally an industrial operation probably had a significant effect on its early configuration as a one bay structure. In fact, the peculiar configuration of the north wall may possibly be explained not as a chimney related feature, but rather as some specialized feature related to the manufacture of snuff and tobacco.

Archaeological Evidence--Analysis of the cellar fill was straightforward. Basically, there were seven distinctly different strata. The occupation of the building was represented by a hard packed sandy clay floor. This was sealed by a level of mixed clay wash, followed by a thick level of dark clay loam across the entire cellar. The destruction of the building was represented by a robber's trench around the southern end of the cellar and a level of brick rubble which formed two distinct piles to the north and south. The rubble was in turn sealed by collapse from the earthen cellar walls, and finally by a thick stratum of brown loam.

Dating evidence for the various strata suggested that the initial floor level was in use until sometime after 1780. Artifacts from the wash dated after ca. 1795, while the loam, robber's trench, and rubble were deposited after 1803 and the final fills after 1810, and possibly as late as ca. 1820.

A section of dry laid bricks directly coinciding with two of the cellar post molds suggests that the building was still in use at the time the dark loam was deposited. The presence of the wash, several erosion gullies in the floor, and section of collapsed wall indicate that there were probably severe drainage problems in this cellar. The addition of a level of soil to wet cellars has been noted on other sites. This was apparently done in order to raise the floor level for better drainage. The presence of the structural feature suggests that there was a time gap between the deposition of the loam and the rubble.

Artifactual Evidence--A detailed analysis of the artifacts from the cellar involved both artifact class frequency analyses and a study of ceramic and glass vessels. Cross-mending information contradicted the conclusions of the archaeological analysis, arguing strongly for a rapid filling of the cellar. This was

demonstrated by numerous cross-mends between stratigraphic units. The vessel analysis led to a series of hypotheses concerning the source of the cellar fill. A high number of vessels represented by few sherds and great variability suggested that the fill had been transported from another source and intentionally placed in the cellar. The nature of the clay loam and the upper fill was consistent with similar fill located in the pond during excavation of the courthouse site. A comparable level of ceramic variability was noted for that fill. It is probably not stretching the interpretation too far, therefore, to propose that the fill for the cellar was derived from the pond. This would have been a simple enough task, considering the close proximity of the pond to the cellar.

Synthesis

It is difficult to synthesize much of the available data. The near absence of historical documentation for the structure leaves that entire avenue of study dead-ended. Temporally, it is not possible to relate the architectural data embodied in the structural remains of the cellar with that available from either archaeological or artifactual analysis. Undoubtedly the architectural features predate the artifacts and fill by a considerable time period and then may reflect entirely different processes.

The problem with the synthesis of the archaeological data with the artifact analysis has already been mentioned. Fundamentally, both realms of evidence support one another, indicating that the cellar was filled during the end of the eighteenth and early nineteenth centuries. The divergence appears in relation to the rapidity of the filling. The archaeological data suggest that there was a time gap between the deposition of the clay loam and the rubble. Cross-mending of ceramics, however, indicates that all levels from the wash (Stratum II) up to the upper loam fill (Stratum VII) were deposited over a short period of time. The characteristics of the artifact assemblage suggested that the fill had been derived from the pond to the west of the cellar, which was probably used as a trash dump by nearby inhabitants. It is possible that the fill was taken from the same general vicinity and may, therefore, explain the cross-mending between levels. If such is the case, it is possible that the temporal difference suggested by the archaeological evidence may be found in analysis of the Mean Ceramic Dates for these levels. Referring to Table 2, it is noted that there is a difference of only eleven years in the mean dates of the clay wash (1789) and the upper loam fill (1800). This span is even shorter between the dark clay loam (1796) and the upper fill (1800). If we assume constant usage of the trash area it is likely that continuous disposal of later ceramic types could account for this small difference and then support the archaeological interpretation. The accuracy of the Mean Ceramic Date

calculation is probably not great enough to interpret from such small differences (particularly when the standard deviation is considered). Another alternative would be to accept the cross-mending data conclusion that the filling was rapid. In order to accept this proposition, however, it is necessary to explain the purpose of this clay loam and the structural underpin. This is not an easy task. Perhaps they represent unsuccessful attempts to repair a building which was past repair. This conjectural explanation would allow for both the loam and the almost contemporary destruction of the building.

The general conclusions which may be reached from the project are:

(1) The structure probably was the early Snuff and Tobacco Manufacture. This is based on architectural and historical evidence more than upon archaeological or artifactual data. Soil chemistry and ethnobotanical evidence did not provide conclusive results one way or the other.

(2) The early industrial structure was converted to a domestic one during the 1760s, perhaps as early as 1764 and certainly by ca. 1770. This too is based predominantly upon historical and architectural data.

(3) The structure was utilized until at least the last decade of the eighteenth century.

(4) Fill in the cellar was deposited rapidly, probably to fill the open hole. The fill was intentionally placed in the cellar and was brought from a nearby peripheral trash disposal area. This conclusion was supported by a detailed artifact analysis.

Later Features and Patterns of Land Use

Several later features intruded into the cellar fill. These included a series of post holes representing a ca. 1850 fence line, a late nineteenth century privy pit, a large disturbance of unknown function, and a modern sewer line trench. To the southeast of the cellar was a late nineteenth century well which was probably contemporaneous with the privy.

Fence Line--A series of square post holes set with 9 inch square posts ran along the western edge of the cellar fill. Several of the holes cut through the fill in the cellar, thus providing a relative date for the fence. Artifacts from the holes substantiate a possible early nineteenth century construction date.

An 1849 deed to Alexander Cheshire denotes a property boundary which may be the same as the excavated remains. No date could be established for the destruction of the fence. The posts were set

on 8 foot centers with a 4 foot wide gate located about 50 feet south of the present location of Church Street.

The large, functionally unidentified feature along the western edge of the cellar at the bulkhead consisted of an irregular shaped hole dug to below the floor level. The fill in the hole is basically the same as that in the cellar, though more mixed. It seems that the hole was dug and filled with the same dirt. There was no indication as to why the hole was originally dug.

The late nineteenth century privy was situated beneath the Bufflap house's south wall. Numerous artifacts were recovered from the unstratified pit. The dark sandy fill contained mainly late nineteenth century bottle glass, including one embossed "J. LEARY DRUGGIST, EDENTON". The bottles represented were medicine, baking soda, and spirit bottles, with Rumford baking powder being the most plentiful. Ceramics were less prominent. Most appear to have come from the cellar fill and date to the early nineteenth century, though numerous pieces of ca. 1870-90 ironstone were also recovered.

The late nineteenth century well was not excavated. An auger test was advanced to determine its depth, which was 7 feet below subsoil. The proximity of the well to the privy was the same as that found on the courthouse lot (Garrow, Haecker, and Hurry 1978:16-20), and may be indicative of a common practice in Edenton during the late 1800s.

Insufficient areal investigation was conducted to evaluate the pattern of land use through time. In the area excavated it appears that little took place on the property between the demise of the snuff and tobacco structure and the division of the tanyard lots along east-west lines ca. 1880. It is probable that the well and privy were related to the Pettigrew ownership of this piece of property.

The remaining features relate to the Bufflap ownership of the lot, which began in 1926 and continued until acquisition of the lot by Chowan County prior to the reported project.

REFERENCES CITED

Binford, Lewis
1962 A new method of calculating dates from kaolin clay pipe stem samples. Southeastern Archaeology Newsletter 9:19-21.

Chappel, Edward
1978 Personal Communication.

Chowan County Record of Deeds
Volumes: G-1, K-1, L-1, M-1, N-1, O-1, B-2, H-2, L-2, O-2, P-2, Q-2, R-2, B-3.

Diderot, Denis
1959 A Diderot pictorial encyclopedia of trades and industry (Vol. 2). Dover Publications, New York.

Garrow, Patrick H.
1977 Proposal to perform archaeological investigations in the Courthouse Square Project, Edenton, North Carolina. Ms. on file, Soil Systems, Marietta.

Garrow, Patrick H., Charles M. Haecker, and Silas D. Hurry
1978 Archaeological investigations in the Courthouse Square Project, proposed courthouse site (Vol. I). Ms. on file, Soil Systems, Marietta.

Garrow, Patrick H., and Richard A. Warner
1977 Phase II intensive archaeological survey, proposed site of Courthouse and Detention Facility for Chowan County, Edenton, North Carolina. Ms. on file, Soil Systems, Marietta.

Glassie, Henry
1975 Folk housing in middle Virginia. University of Tennessee, Knoxville.

Heighton, Robert, and Kathleen Deagan
1972 A new formula for dating kaolin pipe stems. In The Conference on Historic Site Archaeology Papers, 1971. Institute of Archaeology and Anthropology, University of South Carolina, Columbia.

Hughs, Bernard
1968 Victorian pottery and porcelain. Macmillan, New York.

Noël Hume, Audrey
1977 Personal Communication.

Noël Hume, Ivor
1969 Glass from the Colonial Williamsburg Archaeological Collection. Colonial Williamsburg Foundation, Williamsburg.

1970 A guide to artifacts of Colonial America. Alfred A. Knopf, New York.

1977 Personal Communication.

Parramore, Thomas C.
1967 Cradle of the Colony, the history of Chowan County and Edenton, North Carolina. Edenton Chamber of Commerce, Edenton.

Quinn, David B.
1977 Personal Communication.

Robert, Joseph C.
1938 The tobacco kingdom: plantation, market, and factory in Virginia and North Carolina, 1800-1860. Duke University, Durham.

South, Stanley
1977 Method and theory in historical archaeology. Academic Press, New York.

Welsh, Peter
1964 Tanning in the United States to 1850. Museum of History and Technology, Smithsonian Institution, Washington.

APPENDIX A

Ethnobotanical Analysis Report

EDENTON SNUFF AND TOBACCO CELLAR

(18th Century, North Carolina)

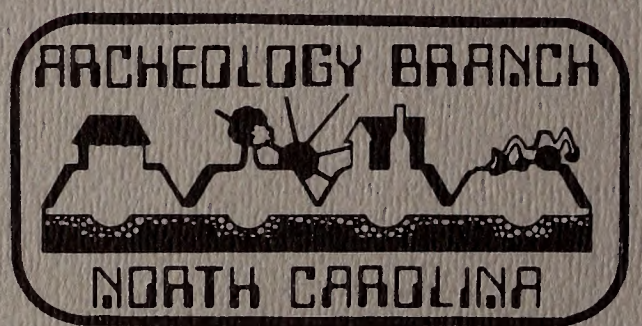
Eleven Flotation Samples Analyzed by R. A. Yarnell

Sample no.	77-25-	loc.	resid.	small snails	carb. unid.	n-c. wood	carb. wood	other carb.	other n-c.
3	34P	w/f	0.86	0.07	0.07	0.67	1.82	0.01 sun-flower seed fragment?	rodent? toe bone Molluge seed
6	36J	w/s	0.09	0.01	0.02	0.04	0.45	fruit - 0.2mm long	
9	42K	e/s	0.13	0.01	X	X	0.08	(0.09 coal)	
11	44K	e/s	0.07	0.02	0.05	0.04	0.33	0.13 haw-thorn fruit	
4	34R	f	0.15	0.02	0.10	0.04	0.48		
8	41M	f	0.23	X	0.04	0.13	0.29		
5	35F	f	0.09	0.05	0.01	0.03	0.20	(same as #6)	
10	43E	f	0.06	0.01	0.03	X	0.22		
7	39E	f	0.03	X	0.01	X	0.14		
2	33G	f	0.18	X	0.03	-	0.46		squash seed fragment
1	32J	f	0.02	0.04	0.02	-	0.11		
totals 8.30 g.			1.91	0.24	0.38	0.96	4.58	0.23	

two decimal numbers = weight in grams.
X = less than 0.01 gram.
loc. = location
resid. = residuum: rootlets and other contaminants plus fragments passing through a one mm. screen (no seeds included).
n-c. wood = non-carbonized "old" wood (almost all pine in small fragments).
carb. unid. = carbonized unidentified plant remains (mostly unrecognizable amorphous fragments)

STATE LIBRARY OF NORTH CAROLINA
3 3091 00748 0890

Published Jointly by the
NORTH CAROLINA ARCHEOLOGICAL COUNCIL
and the



Division of Archives and History
Department of Cultural Resources
Sara W. Hodgkins, Secretary
Raleigh, 1979